

Appendix E: Tributaries, springs, and drains information

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American Falls Subbasin Assessment and TMDL

July 2004

Table E-1. BOR sampling of tributaries and drainages to American Falls Reservoir, May 2001 to August 2003.

Date sampled	Replicate	Time sampled	NO ₃ +NO ₂ (mg/L)	Ortho P (mg/L)	Total P (mg/L)	NH ₃ (mg/L)	TKN (mg/L)	CO ₃ (mg/L)	HCO ₃ (mg/L)	TDS-180 (mg/L)	Alkalinity (mg/L)	SS (mg/L)	Lab pH (SU)	Lab EC (u S/cm)	Turbidity (NTU)	Field Temp (°C)	DO (mg/L)	Field pH (SU)	Field EC (uS/cm)	Flow (cfs)	Flow comments
Bannock Creek at Frontage Road																					
16-May-01		14:35	1.56	0.599	0.6	< 0.01	0.18	6.36	272	421	234	10	8.6	704	4	15.6	11.9	8.48	701	22.5	(Daily Avg streamflows for 10 yrs by USGS = 45.7)
30-May-01		10:30	1.45	0.345	0.37	0.02	0.28	0	289	449	237	9		744	5	12.3	13.7	8.43	748	19.5	(Daily Avg streamflows for 10 yrs by USGS = 33.8)
30-May-01	Y	10:35	1.46	0.355	0.38	< 0.01	0.3	0	289	444	237	7		744	4	12.3	13.9	8.43	742	19.5	(Daily Avg streamflows for 10 yrs by USGS = 33.8)
12-Jun-01		9:55	2.21	0.607	0.63	0.03	0.36	0	310	494	254	6		823	4	13.9	8.9	8.18	822	22	(Daily Avg streamflows for 10 yrs by USGS = 30.8)
2-Jul-01		10:40	2.6	0.747	0.83	0.06	0.36	0	307	450	252	30		752	15	18.1	8.6	8.37	763	32.4	(Daily Avg streamflows for 10 yrs by USGS = 22)
22-Aug-01		13:20	1.86	0.255	0.29	0.05	0.44	0	328	553	269	5	8.3	927	4					20.8	*Daily Avg streamflows for 10 yrs by USGS
22-Aug-01	Y	13:20	1.85	0.255	0.29	0.05	0.45	0	329	552	270	12	8.3	929	5					20.8	*Daily Avg streamflows for 10 yrs by USGS
19-Sep-01		8:50	1.36	0.268	0.32	0.02	0.24	0	316	470	259	6	8.3	820	5	11	10.1			30.2	*Daily Avg streamflows for 10 yrs by USGS
19-Sep-01	Y	8:50	1.48	0.264	0.3	0.01	0.23	0.98	316	465	261	8	8.4	817	5					30.2	*Daily Avg streamflows for 10 yrs by USGS
24-Oct-01		8:50	0.41	0.024	0.134	< 0.01	0.31	0.98	310	391	256	56	8.4	686	24	5	11.7			32.8	*Daily Avg streamflows for 10 yrs by USGS
28-Nov-01		8:40	0.41	0.019	0.094	0.02	0.27	0.49	296	392	244	48	8.4	690	17	1	17			40.3	*Daily Avg streamflows for 10 yrs by USGS
19-Dec-01		8:40	0.78	0.032	0.081	0.03	0.24	0	310	442	254	25	8	766	12	1	15			33.8	*Daily Avg streamflows for 10 yrs by USGS
16-Jan-02		12:25	0.61	0.04	0.117	0.02	NE ¹	5.39	292	409	248	92	8.5	698	24	1	12			36.1	*Daily Avg streamflows for 10 yrs by USGS
25-Feb-02		9:30	0.67	0.05	0.3	0.05	0.75	0	300	372	246	215	8.2	683	86	1				104	*Daily Avg streamflows for 10 yrs by USGS
26-Mar-02		9:35	0.47	0.086	0.8	0.1	1.99	2.94	352	511	294	778	8.4	972	148	4.4	11.6	8.45	1011	72.4	*Daily Avg streamflows for 10 yrs by USGS
2-May-02		8:30	0.64	0.044	0.168	0.02	0.42	0	285	429	234	101	8.3	730	45	8.2	11.7	8.1	764	40.9	*Daily Avg streamflows for 10 yrs by USGS
4-Jun-02		11:00	0.88	0.126	0.168	0.01	0.39	2.45	287	453	239	6	8.4	777	4					24	Estimate. (Daily Avg streamflows for 10 yrs by USGS = 33.2)
26-Jun-02		12:00	1.52	0.402	0.44	0.03	0.34	8.81	280	457	244	6	8.6	759	4					20	Estimate. (Daily Avg streamflows for 10 yrs by USGS = 22.7)
9-Jul-02		11:00	2.47	0.527	0.53	0.04	0.38	9.3	300	531	262	8	8.6	862	4					15	Estimate. (Daily Avg streamflows for 10 yrs by USGS = 18.8)
23-Jul-02		10:15	2.65	0.803	0.85	0.03	0.35	1.96	299	445	248	12	8.4	743	9	17.5	8.6	8.06	376	40	Estimate. (Daily Avg streamflows for 10 yrs by USGS = 26.4)
13-Aug-02		10:40	1.26	0.379	0.39	< 0.01	0.32	7.34	290		250	2	8.6	751	3	16.6	8.8	8.59	348	14	Estimate. (Daily Avg streamflows for 10 yrs by USGS = 22.2)
18-Sep-02		9:15	2.29	0.651	0.68	0.02	0.26	0	311		255	7	8.3	777	4	11.5	7.3	7.86	1346	44	Estimate. (Daily Avg streamflows for 10 yrs by USGS = 28.3)
8-Oct-02		15:30	1.03	0.051	0.1	0.02	0.36	7.83	306		264	24	8.6	829	12	12.68	15.27	8.54	811	12	Estimate. (Daily Avg streamflows for 10 yrs by USGS = 27.5)
5-Nov-02		13:15	0.47	0.028	0.115	0.03	0.38	0	337		276	68	8.3	750	24	2.7	11.9	8.23	425	40	Estimate. (Daily Avg streamflows for 10 yrs by USGS = 39.2)
26-Nov-02		9:30	0.41	0.032	0.091	< 0.01	0.27	0.98	319		263	47	8.4	702	17					50	Estimate. (Daily Avg streamflows for 10 yrs by USGS = 40.2)
18-Dec-02		9:30	0.47	0.039	0.2	< 0.01	0.38	0	306		251	127	8.3	675	30	1	10.9	8.21	1220	34.1	*Daily Avg streamflows for 10 yrs by USGS
Cedar Spillway																					
3-Jul-01		8:55	0.2	0.004	0.023	0.02	0.28	0	154	201	126	3		332	3	21.5	8	8.53	336		
1-Aug-01		11:00	< 0.01	< 0.003	0.02	< 0.01	0.17	8.81	124	177	116	< 1	8.7	318	< 1	17	8.9				
18-Sep-01		9:25	0.01	< 0.003	0.026	< 0.01	0.3	2.45	134	193	114	8	8.5	319	1	16	9.6				
18-Sep-01	Y	9:25	0.02	< 0.003	0.023	< 0.01	0.36	1.96	138	188	116	6	8.5	316	1						
2-May-02		11:15	< 0.01	0.004	0.068	< 0.01	0.33	5.39	125	188	111	16	8.8	299	8	11.9	12.4	8.84	309		
3-Jun-02		12:00	0.01	< 0.003	0.042	< 0.01	0.22	2.94	135	187	116	22	8.5	314	4					54	ASCC staff gage and table
27-Jun-02		16:00	< 0.01	< 0.003	0.022	0.02	0.52	7.83	132	177	121	11	8.7	311	3					35.2	ASCC staff gage and table
27-Jun-02	Y	16:00	0.01	< 0.003	0.022	0.02	0.47	8.81	129	183	120	11	8.8	311	3					35.2	ASCC staff gage and table
10-Jul-02		10:15	< 0.01	< 0.003	0.018	0.02	0.18	2.94	148	191	126	7	8.5	322	3					8.5	ASCC staff gage and table
24-Jul-02		11:10	0.02	< 0.003	0.02	< 0.01	0.18	3.92	143	187	124	4	8.7	314	2	21	8.2	8.48	159	48.4	ASCC staff gage and table
12-Aug-02		9:20	< 0.01	< 0.003	0.021	0.01	0.2	3.43	128		111	4	8.6	294	2	18	8.4	8.41	135	32.8	ASCC staff gage and table
28-Aug-02		10:30	< 0.01	< 0.003	0.013	0.02	0.15	4.9	120		107	< 1	8.8	295	1	18.2	8	8.72	254	7.8	ASCC staff gage and table
Clear Creek at Sheepskin Road																					
16-May-01		11:55	1.45	0.012	0.014	< 0.01	0.16	3.43	241	331	203	8	8.5	546	2	14.1	9.9	8.27	543	17.9	
30-May-01		12:15	1.57	0.012	0.016	0.01	0.05	0	245	330	201	3		537	< 1	15.4	11.4	8.35	527	20.8	
12-Jun-01		10:50	1.51	0.008	0.034	0.02	0.09	0	246	328	202	4		541	< 1	11.1	10.2	8.28	541	19.8	
12-Jun-01	Y	10:55	1.52	0.007	0.022	0.01	0.07	0	247	338	203	3		541	1	11.1	10.2	8.27	541	19.8	
2-Jul-01		11:35	1.73	0.008	0.016	< 0.01	0.07	0	247	313	203	2		535	1	15.9	11.6	8.42	535	17.7	
19-Sep-01		9:40	1.35	0.01	0.029	0.01	0.41	1.47	247	326	205	2	8.4	545	< 1	9	11.9				
24-Oct-01		9:30	1.6	0.011	0.052	0.01	0.28	0	256	336	210	13	8.2	552	7	7	11.5				
28-Nov-01		9:25	1.62	0.014	0.028	0.03	0.28	0	252	337	207	11	8.3	556	4	5	12.5				
28-Nov-01	Y	9:25	1.63	0.014	0.023	0.02	0.24	0	252	333	207	11	8.3	557	3						
19-Dec-01		9:30	1.63	0.016	0.076	0.06	0.88	0	253	334	207	48	8.1	555	11	6	11				
16-Jan-02		11:25	1.07	0.015	0.026	< 0.01	NE ¹	0	228	290	187	9	8.3	487	3	7	12				
25-Feb-02		10:25	1.62	0.016	0.022	0.04	0.2	0	249	326	204	5	8.2	557	1	4					
26-Mar-02		10:20	1.56	0.013	0.029	0.02	0.31	0	253	341	207	26	8.3	555	3	9.7	10.8	8.29	570		
1-May-02		14:30	1.52	0.009	0.021	0.01	0.16	3.43	241	332	203	8	8.5	539	3	13.8	13.2	8.32	560		
4-Jun-02		12:00	1.38	0.006	< 0.01	0.02	0.16	3.43	240	329	203	6	8.5	537	2					48	Estimate
26-Jun-02		13:00	1.36	0.006	0.029	0.01	0.08	5.39	232	278	199	3	8.5	526	< 1					57	Estimate
9-Jul-02		12:00	1.43	0.012	0.027	0.02	0.15	5.39	234	334	201	4	8.5	530	< 1					120	Estimate

American Falls Subbasin Assessment and TMDL

July 2004

Table E-1. Continued.

Date sampled	Replicate	Time sampled	NO ₃ +NO ₂ (mg/L)	Ortho P (mg/L)	Total P (mg/L)	NH ₃ (mg/L)	TKN (mg/L)	CO ₃ (mg/L)	HCO ₃ (mg/L)	TDS-180 (mg/L)	Alkalinity (mg/L)	SS (mg/L)	Lab pH (SU)	Lab EC (u S/cm)	Turbidity (NTU)	Field Temp (°C)	DO (mg/L)	Field pH (SU)	Field EC (uS/cm)	Flow (cfs)	Flow comments
Clear Creek at Sheepskin Road																					
23-Jul-02		11:20	1.46	0.007	0.039	0.02	0.1	4.41	238	321	203	2	8.5	534	< 1	14.6	11.1	8.33	269	80	Estimate
13-Aug-02		12:15	1.36	0.006	0.012	< 0.01	0.1	3.43	240		203	1	8.4	529	1	13.6	11.9	8.43	242	20	Estimate
18-Sep-02		10:30	1.48	0.008	0.018	< 0.01	0.08	1.96	245		204	1	8.4	550	< 1	10.2	9.8	8.03	950	20	Estimate
9-Oct-02		10:45	1.54	0.006	0.011	< 0.01	0.08	0	249		204	< 1	8.3	646	< 1	8.8	10.9	8.23	534	15	Estimate
29-Oct-02		10:30	1.5	0.006	0.026	0.01	0.1	0	247		203	2	8.3	549	< 1	8.6	11.3	7.77	308	17	Estimate
26-Nov-02		9:10	1.64	0.012	0.035	0.01	0.38	0	252		207	23	8.2	552	6					30	Estimate
18-Dec-02		11:15	1.6	0.014	0.077	0.03	0.52	0	252		207	38	8.2	553	10	5.9	9.2	8.11	985		No flow data
Colburn Wasteway near Sterling																					
15-May-01		13:15	0.02	0.006	0.064	0.08	0.85	1.96	226	767	189	12	8.4	1170	5	15.9	9.3	8.54	1165	3	
29-May-01		11:40	0.01	0.008	0.069	0.05	1.14	0	204	768	167	15		1153	8	18	12.7	9.03	1162	2.5	
11-Jun-01		9:55	< 0.01	0.004	0.048	0.02	0.69	0	175	523	144	12		794	6	16.2	11.6	9.05	804	4.1	
3-Jul-01		10:10	0.01	0.009	0.03	0.08	0.67	0	158	587	130	5		881	5	20.8	9.7	8.92	891	1.5	
3-Jul-01	Y	10:15	0.02	0.01	0.027	0.1	0.69	0	159	564	130	5		883	5	20.8	9.6	8.92	890	1.5	
1-Aug-01		9:40	0.18	0.073	0.155	0.92	2.46	0	208	785	171	32	8.2	1222	8	13	7.4				
24-Aug-01		9:05	3	0.028	0.053	0.12	0.32	0	292	544	239	4	8	887	2						
18-Sep-01		10:45	0.57	0.01	0.063	0.11	1.22	0	333	656	273	31	8.3	1050	4	12	3.5				
23-Oct-01		8:40	0.02	0.016	0.046	0.08	1.06	0	317	1830	260	11	8.2	2400	5	7	6.2				
27-Nov-01		10:45	0.67	0.006	0.021	0.02	0.56	3.92	287	946	242	2	8.6	1349	2	1	16				
3-Jun-02		16:00	0.84	0.004	0.036	0.01	0.68	12.7	233	548	212	10	8.8	867	6					7	Estimate
27-Jun-02		15:00	0.12	0.022	0.076	0.03	0.6	8.32	209	550	185	20	8.7	821	4					12	Estimate
10-Jul-02		9:15	0.13	0.051	0.07	0.03	0.43	0	219	481	180	2	8.1	743	2					18	Estimate
24-Jul-02		9:45	0.57	0.028	0.047	0.02	0.41	0	244	467	200	2	8.1	708	1	17.6	5.3	7.9	360	8	Estimate
12-Aug-02		10:55	1.13	0.007	0.028	0.03	0.28	0	238		195	4	8.3	559	2	15.1	7.5	8.02	299	8	Estimate
5-Nov-02		10:15	0.22	0.004	0.013	0.03	0.55	6.36	264		227	3	8.6	1204	3	1.7	14.6	8.47	684	2	Estimate
25-Nov-02		12:30	0.63	< 0.003	< 0.01	0.03	0.56	9.79	278		244	4	8.7	1327	2					2	Estimate
17-Dec-02		15:15	1.84	0.007	0.035	0.16	0.68	0	347		285	9	8.3	1372	4	1.9	12.1	7.86	2420	1.5	Estimate
15-Jan-03		10:00	1.82	0.007	0.021	0.17	0.53	0	331		271	5	8.1	1427	4	1					No flow data
10-Feb-03		10:21	2.6	< 0.003	0.022	0.08	0.5	0	354		290	5	8.1	1655	3						No flow data
1-Apr-03		11:15	0.3	0.003	0.098	0.06	1.24	4.92	357		301	23	8.5	1796	10	8.4	10.3	8.02		2	Estimate
24-Apr-03		11:10	0.18	< 0.003	0.099	0.03	0.8	0	289		237	11	8.2	1343	4	10.2	9	7.91		2	Estimate
4-Jun-03		12:30	0.02	0.003	0.036	0.01	0.67	4.43	196		168	6	8.5	797	5					5	Estimate
18-Jun-03		11:00	0.02	0.007	0.032	0.01	0.52	0	204		167	4	8.2	727	2	21.5	6.5	7.99			No flow data.
Crystal Creek																					
19-Sep-01		9:50	0.96	0.014	0.026	0.02	0.34	0	230	274	189	9	8.3	480	2	9.5	9.5				
Crystal Springs Creek below hatchery																					
16-May-01		10:40	2.13	0.014	0.075	< 0.01	0.46	1.47	257	513	213	101	8.4	848	19	12	9.8	8.03	844	90	(Daily Avg streamflows for 4 yrs in the 1980's by USGS = 46)
29-May-01		13:45	2.04	0.01	0.068	0.08	0.43	0	248	501	203	19		829	3	14.5	11.6	8.41	834	48	(Daily Avg streamflows for 4 yrs in the 1980's by USGS = 38.3)
11-Jun-01		11:30	1.98	0.008	0.042	0.09	0.43	0	257	504	211	11		823	3	15.3	11.9	8.24	830	59	(Daily Avg streamflows for 4 yrs in the 1980's by USGS = 52)
11-Jun-01	Y	11:30	1.96	0.008	0.047	0.08	0.42	0	256	503	210	13		826	3	15.3	11.6	8.32	831	59	(Daily Avg streamflows for 4 yrs in the 1980's by USGS = 52)
3-Jul-01		11:25	1.79	0.019	0.046	0.08	0.41	0	246	485	202	10		774	4	18.6	11.6	8.52	780	52	(Daily Avg streamflows for 4 yrs in the 1980's by USGS = 40.3)
2-Aug-01		10:15	1.77	0.01	0.028	0.03	0.38	7.34	231	430	202	11	8.6	722	< 1	14	14.1			43	*Daily Avg streamflows for 4 yrs in the 1980's by USGS
2-Aug-01	Y	10:15	1.75	0.01	0.025	0.02	0.32	10.3	224	426	201	10	8.6	723	< 1					43	*Daily Avg streamflows for 4 yrs in the 1980's by USGS
24-Aug-01		9:55	1.66	0.014	0.04	0.04	0.34	0	242	395	198	14	8.3	692	2					42.3	*Daily Avg streamflows for 4 yrs in the 1980's by USGS
18-Sep-01		11:50	1.47	0.015	0.046	0.03	0.36	1.47	239	405	198	6	8.4	670	1	14	12.9			51.3	*Daily Avg streamflows for 4 yrs in the 1980's by USGS
23-Oct-01		9:20	1.8	0.026	0.058	0.05	0.25	0	245	420	201	6	8.3	691	2	8	12.3			42.3	*Daily Avg streamflows for 4 yrs in the 1980's by USGS
27-Nov-01		10:00	1.84	0.032	0.065	0.04	0.25	0.98	245	445	203	5	8.4	718	2	4	14			36.7	*Daily Avg streamflows for 4 yrs in the 1980's by USGS
27-Nov-01	Y	10:00	1.85	0.034	0.065	0.03	0.22	0	279	443	229	6	8.3	718	2					36.7	*Daily Avg streamflows for 4 yrs in the 1980's by USGS
18-Dec-01		10:40	1.97	0.028	0.046	0.06	0.27	0	249	450	204	4	8.2	745	2	5	14			37.7	*Daily Avg streamflows for 4 yrs in the 1980's by USGS
16-Jan-02		10:10	2.07	0.041	0.061	0.11	NE ¹	0	256	463	210	10	8.2	782	4	4	12			38.7	*Daily Avg streamflows for 4 yrs in the 1980's by USGS
25-Feb-02		12:00	2	0.04	0.053	0.11	0.38	0	260	467	213	7	8.2	812	3	4				42.7	*Daily Avg streamflows for 4 yrs in the 1980's by USGS
26-Mar-02		14:00	2.07	0.031	0.038	0.09	0.27	0	254	479	208	5	8.2	809	1	11.4	12.1	8.16	841	38	*Daily Avg streamflows for 4 yrs in the 1980's by USGS
1-May-02		10:15	1.78	0.005	0.033	0.02	0.39	2.45	247	493	207	9	8.5	805	4	10.2	14.8	8.31	846	60	Estimate. (Daily Avg streamflows for 4 yrs in the 1980's by USGS = 34.8)
1-May-02	Y	10:15	1.78	0.005	0.036	0.02	0.39	2.45	248	486	207	7	8.5	806	3					60	Estimate. (Daily Avg streamflows for 4 yrs in the 1980's by USGS = 34.8)
3-Jun-02		15:15	1.86	0.004	0.094	0.04	0.94	8.81	225	492	199	30	8.7	808	4					52	Estimate. (Daily Avg streamflows for 4 yrs in the 1980's by USGS = 44.0)
26-Jun-02		14:30	1.67	0.018	0.042	0.1	0.36	10.3	221	469	198	5	8.6	762	1					46	Estimate. (Daily Avg streamflows for 4 yrs in the 1980's by USGS = 30.8)
9-Jul-02		14:30	1.64	0.025	0.046	0.08	0.36	10.3	219	470	197	5	8.7	728	1					50	Estimate. (Daily Avg streamflows for 4 yrs in the 1980's by USGS = 43.3)
9-Jul-02	Y	14:30	1.65	0.026	0.044	0.06	0.39	10.3	217	464	195	6	8.7	727	1					50	Estimate. (Daily Avg streamflows for 4 yrs in the 1980's by USGS = 43.3)

American Falls Subbasin Assessment and TMDL

July 2004

Table E-1. Continued.

Date sampled	Replicate	Time sampled	NO ₃ +NO ₂ (mg/L)	Ortho P (mg/L)	Total P (mg/L)	NH ₃ (mg/L)	TKN (mg/L)	CO ₃ (mg/L)	HCO ₃ (mg/L)	TDS-180 (mg/L)	Alkalinity (mg/L)	SS (mg/L)	Lab pH (SU)	Lab EC (u S/cm)	Turbidity (NTU)	Field Temp (°C)	DO (mg/L)	Field pH (SU)	Field EC (uS/cm)	Flow (cfs)	Flow comments
Crystal Springs Creek below hatchery																					
23-Jul-02		14:30	1.6	0.026	0.057	0.06	0.37	10.8	214	386	194	7	8.7	696	1	19.6	12.7	8.69	354	51	Estimate. (Daily Avg streamflows for 4 yrs in the 1980's by USGS = 35.7)
12-Aug-02		13:20	1.51	0.02	0.053	0.07	0.36	3.92	227		193	10	8.5	676	3	17.6	10.8	8.45	311	47	Estimate. (Daily Avg streamflows for 4 yrs in the 1980's by USGS = 47.3)
28-Aug-02		12:55	1.5	0.03	0.093	0.08	0.51	3.92	236		200	30	8.6	663	6	15.4	7.3	8.04	584	51	Estimate. (Daily avg streamflows for 4 yrs in the 1980's by USGS = 42.7)
17-Sep-02		13:15	1.47	0.028	0.053	0.07	0.33	0.98	238		197	10	8.4	656	2	12.6	9	8.06	117	50	Estimate. (Daily avg streamflows for 4 yrs in the 1980's by USGS = 51.7)
8-Oct-02		13:00	1.37	0.028	0.042	0.01	0.28	0	237		194	5	8.3	647	2	11.97	11.45	8.23	630	58	Estimate. (Daily avg streamflows for 4 yrs in the 1980's by USGS = 39.7)
29-Oct-02		13:40	1.48	0.026	0.043	0.06	0.28	0	229		188	5	8.3	651	2	8	13.2	8.27	361	52	Estimate. (Daily avg streamflows for 4 yrs in the 1980's by USGS = 44.0)
25-Nov-02		14:15	1.55	0.037	0.051	0.11	0.27	0	244		200	4	8.3	670	2					51	Estimate. (Daily avg streamflows for 4 yrs in the 1980's by USGS = 38.7)
18-Dec-02		14:15	1.69	0.035	0.058	0.08	0.24	0	244		200	4	8.2	689	1	5.2	10.9	8.13	1228	55	Estimate. (Daily avg streamflows for 4 yrs in the 1980's by USGS = 37.7)
15-Jan-03		11:20	1.78	0.032	0.04	0.13	0.2	0	248		203	2	8.2	734	1	7				49	Estimate. (Daily avg streamflows for 4 yrs in the 1980's by USGS = 39.7)
10-Feb-03		11:10	1.86	0.029	0.06	0.12	0.34	0	255		209	9	8.2	757	3					38	*Daily avg streamflows for 4 yrs in the 1980's by USGS
12-Mar-03		11:30	1.77	0.028	0.051	0.1	0.33	0	256		210	8	8.3	768	2	9.3	10.8	8.13		48	Estimate. (Daily avg streamflows for 4 yrs in the 1980's by USGS = 38.3)
1-Apr-03		13:00	1.59	0.018	0.041	0.07	0.35	1.48	249		207	5	8.4	760	2	11	11.7	8.13		49	Estimate. (Daily avg streamflows for 4 yrs in the 1980's by USGS = 33.7)
24-Apr-03		9:30	1.66	0.003	0.037	0.09	0.37	0	258		212	6	8.1	782	2	9.1	10.5	7.67		50	Estimate. (Daily avg streamflows for 4 yrs in the 1980's by USGS = 37.0)
12-May-03		11:50	1.55	< 0.003	0.022	0.12	0.24	3.44	241		203	3	8.5	771	1	13.4	13.4	8.3		68	Estimate. (Daily avg streamflows for 4 yrs in the 1980's by USGS = 46.8)
4-Jun-03		13:45	1.13	< 0.003	0.025	< 0.01	0.35	19.7	177		178	6	8.9	701	2					55	Estimate. (Daily avg streamflows for 4 yrs in the 1980's by USGS = 43.8)
4-Jun-03	Y		1.14	< 0.003	0.025	0.03	0.37	16.7	180		175	5	8.9	697	1					55	Estimate. (Daily avg streamflows for 4 yrs in the 1980's by USGS = 43.8)
18-Jun-03		13:10	1.03	0.004	0.02	0.04	0.56	11.8	201		185	4	8.7	693	< 1	20.8	14.2	8.79		50	Estimate. (Daily avg streamflows for 4 yrs in the 1980's by USGS = 37.8)
8-Jul-03		9:45	0.88	< 0.003	0.02	0.02	0.29	1.48	230		191	4	8.4	670	1	16.1				17	Estimate. (Daily avg streamflows for 4 yrs in the 1980's by USGS = 46.3)
Danielson Creek near mouth																					
16-May-01		9:55	0.74	0.01	0.026	< 0.01	0.18	1.47	212	349	176	8	8.4	578	3	14.1	8.9	8.23	574	42.2	(Daily Avg streamflows for 6 yrs in the 1980's by USGS = 63.2)
29-May-01		13:20	0.71	0.014	0.038	0.02	0.2	0	197	317	162	8		520	2	18	9.8	8.54	525	50.5	(Daily Avg streamflows for 6 yrs in the 1980's by USGS = 64.7)
11-Jun-01		11:00	0.55	0.007	0.027	0.02	0.2	0	190	301	156	4		499	1	16.7	11.2	8.65	501	46.9	(Daily Avg streamflows for 6 yrs in the 1980's by USGS = 67.5)
3-Jul-01		11:00	0.5	0.01	0.025	< 0.01	0.22	0	187	316	153	5		484	3	19.8	9.8	8.65	486	55.7	(Daily Avg streamflows for 6 yrs in the 1980's by USGS = 64.5)
2-Aug-01		9:40	0.47	0.008	0.017	0.01	0.2	3.92	185	281	158	6	8.5	479	< 1	16	11.2			64.8	*Daily Avg streamflows for 6 yrs in the 1980's by USGS
24-Aug-01		9:40	0.54	0.012	0.029	0.02	0.21	0	197	282	162	6	8.3	474	< 1					64	*Daily Avg streamflows for 6 yrs in the 1980's by USGS
24-Aug-01	Y	9:40	0.64	0.011	0.028	0.02	0.21	0	197	276	162	7	8.2	485	1					64	*Daily Avg streamflows for 6 yrs in the 1980's by USGS
18-Sep-01		11:30	0.49	0.007	0.039	0.01	0.27	1.47	196	296	163	8	8.4	480	1	14	12.9			65.7	*Daily Avg streamflows for 6 yrs in the 1980's by USGS
23-Oct-01		9:10	0.84	0.012	0.025	0.03	0.25	0	203	304	166	6	8.2	508	2	8	9.3			66	*Daily Avg streamflows for 6 yrs in the 1980's by USGS
23-Oct-01	Y	9:10	0.82	0.012	0.025	0.03	0.22	0	203	305	166	4	8.3	509	2					66	*Daily Avg streamflows for 6 yrs in the 1980's by USGS
27-Nov-01		10:10	0.94	0.012	0.026	0.03	0.16	0	206	315	169	8	8.3	526	2	3	13			56.3	*Daily Avg streamflows for 6 yrs in the 1980's by USGS
18-Dec-01		10:50	1.1	0.021	0.044	0.13	0.34	0	216	327	177	14	8.2	546	4	4	12			54.5	*Daily Avg streamflows for 6 yrs in the 1980's by USGS
16-Jan-02		10:00	1.17	0.024	0.041	0.07	NE ¹	0	217	317	178	8	8.2	557	4	3	13.5			53.3	*Daily Avg streamflows for 6 yrs in the 1980's by USGS
25-Feb-02		12:15	1.11	0.025	0.036	0.07	0.27	0	218	329	179	11	8.2	568	3	3				56.3	*Daily Avg streamflows for 6 yrs in the 1980's by USGS
26-Mar-02		14:15	1.03	0.006	0.038	0.02	0.3	0	223	339	183	16	8.3	586	3	11.5	11.1	8.38	611	52.5	*Daily Avg streamflows for 6 yrs in the 1980's by USGS
1-May-02		9:30	0.93	0.005	0.035	0.02	0.24	0	218	350	179	8	8.3	580	4	10.8	11.6	8.15	608	59.6	*Daily Avg streamflows for 6 yrs in the 1980's by USGS
3-Jun-02		14:45	0.62	0.014	0.04	0.03	0.32	2.45	197	318	166	10	8.5	530	3					60	Estimate. (Daily Avg streamflows for 6 yrs in the 1980's by USGS = 67.0)
26-Jun-02		14:45	0.53	0.007	0.044	0.02	0.18	9.3	164	280	150	8	8.7	469	2					65.2	*Daily Avg streamflows for 6 yrs in the 1980's by USGS
9-Jul-02		15:00	0.49	0.013	0.018	0.02	0.28	7.83	163	292	147	7	8.7	463	2					53	Estimate. (Daily Avg streamflows for 6 yrs in the 1980's by USGS = 63.0)
23-Jul-02		14:45	0.49	0.011	0.045	0.01	0.22	7.34	174	278	155	6	8.7	467	2	20.4	11.4	8.66	236	62.5	*Daily Avg streamflows for 6 yrs in the 1980's by USGS
12-Aug-02		13:00	0.4	0.008	0.042	0.02	0.21	5.88	172		151	6	8.6	451	1	14.2	11.3	8.58	207	69.5	*Daily Avg streamflows for 6 yrs in the 1980's by USGS
28-Aug-02		12:40	0.44	0.011	0.023	< 0.01	0.22	2.94	188		159	6	8.5	457	1	16.6	9.4	8.35	403	51	Estimate. (Daily avg streamflows for 6 yrs in the 1980's by USGS = 64.2)
17-Sep-02		12:45	0.6	0.014	0.03	0.03	0.18	0	202		166	5	8.3	497	1	14.1	8.3	8.06	89	39	Estimate. (Daily avg streamflows for 6 yrs in the 1980's by USGS = 65.3)
8-Oct-02		13:30	0.56	0.007	0.023	0.03	0.22	1.96	188		157	8	8.5	468	2	12.97	11.73	8.47	457	67.6	*Daily Avg streamflows for 6 yrs in the 1980's by USGS
29-Oct-02		14:15	0.79	< 0.003	0.033	0.03	0.36	0	193		158	12	8.3	493	3	8.9	11.7	8.33	276	50	Estimate. (Daily Avg streamflows for 6 yrs in the 1980's by USGS = 62.3)
25-Nov-02		13:45	0.9	0.007	0.045	0.05	0.42	0	208		171	18	8.3	510	4					40	Estimate. (Daily Avg streamflows for 6 yrs in the 1980's by USGS = 56.8)
18-Dec-02		14:45	0.95	0.02	0.041	0.06	0.16	0	204		167	9	8.2	518	2	5.3	10.4	8.2	922	36	Estimate. (Daily Avg streamflows for 6 yrs in the 1980's by USGS = 54.5)
15-Jan-03		11:00	1.04	0.018	0.034	0.09	0.16	0	209		171	9	8.1	536	2	6				53.3	*Daily Avg streamflows for 6 yrs in the 1980's by USGS
10-Feb-03		10:55	1.05	0.013	0.045	0.07	0.25	0	213		175	15	8.2	544	4					54	*Daily Avg streamflows for 6 yrs in the 1980's by USGS
12-Mar-03		11:00	0.93	< 0.003	0.054	0.03	0.41	0	220		180	22	8.3	555	6	8.6	10.9	8.2		53.8	*Daily Avg streamflows for 6 yrs in the 1980's by USGS
1-Apr-03		12:45	0.94	0.007	0.049	0.01	0.32	0.98	216		179	16	8.4	553	4	10.6	10.3	8.1		52.3	*Daily Avg streamflows for 6 yrs in the 1980's by USGS
24-Apr-03		9:45	0.76	< 0.003	0.046	0.05	0.38	0	216		177	21	8.2	542	4	10.7	9.8	7.94		58.4	*Daily Avg streamflows for 6 yrs in the 1980's by USGS
12-May-03		11:20	0.7	< 0.003	0.036	0.03	0.2	0	204		167	22	8.3	513	3	13.1	9.9	8.14		63	*Daily Avg streamflows for 6 yrs in the 1980's by USGS
4-Jun-03		13:30	0.48	0.005	0.032	0.02	0.27	0	197		162	8	8.3	498	3					65.5	*Daily Avg streamflows for 6 yrs in the 1980's by USGS
18-Jun-03		12:45	0.33	0.004	0.028	< 0.01	0.23	3.44	178		152	7	8.5	472	1	20.7	10.8	8.51		66	*Daily Avg streamflows for 6 yrs in the 1980's by USGS
8-Jul-03		10:00	0.31	0.006	0.02	0.02	0.22	1.48	175		146	5	8.4	445	2	16.7				63.7	*Daily Avg streamflows for 6 yrs in the 1980's by USGS
8-Jul-03	Y	10:00	0.32	0.004	0.022	0.02	0.22	2.46	173		146	4	8.5	445	2					63.7	*Daily Avg streamflows for 6 yrs in the 1980's by USGS

American Falls Subbasin Assessment and TMDL

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Table E-1. Continued.

Date sampled	Replicate	Time sampled	NO ₃ +NO ₂ (mg/L)	Ortho P (mg/L)	Total P (mg/L)	NH ₃ (mg/L)	TKN (mg/L)	CO ₃ (mg/L)	HCO ₃ (mg/L)	TDS-180 (mg/L)	Alkalinity (mg/L)	SS (mg/L)	Lab pH (SU)	Lab EC (uS/cm)	Turbidity (NTU)	Field Temp (°C)	DO (mg/L)	Field pH (SU)	Field EC (uS/cm)	Flow (cfs)	Flow comments
Little Hole Draw/Hazard Creek																					
15-May-01		11:00	0.06	0.003	0.082	0.03	0.78	0.98	163	227	135	36	8.4	385	10	15.2	8.7	8.6	379	58	*Preliminary flow from Idaho Power Gage
15-May-01	Y	11:05	0.04	0.004	0.082	0.02	0.61	1.96	161	228	135	37	8.5	382	10	15.2	8.7	8.63	378	58	*Preliminary flow from Idaho Power Gage
29-May-01		10:55	0.13	0.01	0.084	0.04	0.49	0	172	235	141	33		395	9	16.2	10.6	8.7	381	34.8	*Preliminary flow from Idaho Power Gage
11-Jun-01		9:05	0.2	0.013	0.06	0.04	0.26	0	171	240	140	14		390	5	16.3	10.5	8.45	393	24.2	*Preliminary flow from Idaho Power Gage
3-Jul-01		9:30	0.21	0.009	0.053	0.02	0.27	0	163	225	134	8		364	6	21.4	8	8.5	368	23.1	*Preliminary flow from Idaho Power Gage
1-Aug-01		10:20	0.89	0.047	0.077	0.12	0.39	0	197	302	162	7	8.2	511	1	14	8.8			7.6	*Preliminary flow from Idaho Power Gage
1-Aug-01	Y	10:20	0.92	0.048	0.076	0.12	0.42	0	199	292	163	5	8.3	511	1					7.6	*Preliminary flow from Idaho Power Gage
22-Aug-01		11:05	0.78	0.083	0.13	0.36	0.86	0	198	309	162	16	8.2	512	6					6.6	*Preliminary flow from Idaho Power Gage
18-Sep-01		10:10	0.14	0.014	0.063	0.03	0.82	0	156	217	128	11	8.3	369	2	15	10.2			27.5	*Preliminary flow from Idaho Power Gage
23-Oct-01		8:11	4.94	0.393	0.46	0.08	0.7	0	274	560	225	2	8.2	893	2	8	7.5			1.3	*Preliminary flow from Idaho Power Gage
27-Nov-01		11:15	5.86	0.444	0.54	0.05	0.44	0	278	557	228	2	8.3	892	1	2	12			1.0	*Preliminary flow from Idaho Power Gage
18-Dec-01		11:55	3.5	0.474	0.51	0.62	1.03	0	288	556	236	2	8.2	889	1	2	11.5			1.0	*Preliminary flow from Idaho Power Gage
16-Jan-02		9:10	3.98	0.425	0.49	1.88	NE ¹	0	280	544	230	5	8.1	872	4	1	11			1.0	*Preliminary flow from Idaho Power Gage
25-Feb-02		13:30	3.97	0.53	0.56	1.41	2.28	0	270	540	221	9	8.1	857	6	3				1.0	*Preliminary flow from Idaho Power Gage
26-Mar-02		15:30	3.08	0.495	0.6	2.41	3.28	0	321	618	263	10	8.3	988	5	11.8	13.2	8.33	1023	1.5	*Preliminary flow from Idaho Power Gage
2-May-02		11:42	0.04	0.005	0.117	< 0.01	0.51	2.94	130	171	112	49	8.7	306	13	12.6	12.7	8.78	316	63.0	Published flow by Idaho Power
3-Jun-02		12:45	0.09	0.014	0.055	< 0.01	0.34	5.39	133	199	118	15	8.8	328	6					46.0	Published flow by Idaho Power
27-Jun-02		15:30	0.17	0.025	0.059	0.03	0.52	15.2	140	222	140	9	9	371	6					23.0	Published flow by Idaho Power
10-Jul-02		9:45	0.14	0.05	0.064	0.05	0.28	0.98	168	223	139	4	8.4	375	2					16.0	Published flow by Idaho Power
24-Jul-02		10:25	0.07	0.038	0.067	0.01	0.31	2.45	152	188	129	8	8.5	332	2	20.6	8.8	8.41	168	40.0	Published flow by Idaho Power
24-Jul-02	Y	10:25	0.06	0.038	0.075	< 0.01	0.32	2.45	151	196	128	8	8.5	332	2	20.6	8.8	8.41	168	40.0	Published flow by Idaho Power
12-Aug-02		14:15	0.12	0.015	0.054	0.04	0.48	13.7	116		118	7	9.1	318	3	20.9	12.9	9.06	146	28	Published flow by Idaho Power
28-Aug-02		11:10	0.2	0.016	0.034	0.01	0.22	4.9	142		125	2	8.7	355	1	17.2	10.6	8.69	314	21	Published flow by Idaho Power
17-Sep-02		11:00	3.27	0.267	0.3	0.03	0.71	0	308		253	3	8.3	955	1	11.8	7.7	7.87	170	1.7	Published flow by Idaho Power
8-Oct-02		11:00	3.22	0.182	0.22	0.03	0.49	0	293		240	3	8.1	877	1	9.12	9.53	7.87	857	2	*Preliminary flow from Idaho Power Gage
5-Nov-02		9:15	4.25	0.415	0.45	0.19	1.34	0	268		220	5	8	857	3	2.4	9	7.73	486	1.28	*Preliminary flow from Idaho Power Gage
25-Nov-02		11:00	4.22	0.258	0.27	0.29	0.54	0	289		237	4	8.2	870	< 1					1.82	*Preliminary flow from Idaho Power Gage
17-Dec-02		14:30	2.74	0.727	0.82	0.45	5.4	0	294		241	5	7.9	913	3	5.1	8.4	7.45	1626	3.39	*Preliminary flow from Idaho Power Gage
15-Jan-03		9:30	5.2	0.433	0.49	0.82	3	0	297		244	3	7.9	921	2	4				5.51	*Preliminary flow from Idaho Power Gage
10-Feb-03		9:45	3.7	0.267	0.35	2.54	2.7	0	299		245	8	8	905	3	3				7.06	*Preliminary flow from Idaho Power Gage
12-Mar-03		9:00	2.21	0.63	0.78	2.77	5.36	0	345		283	14	7.8	475	7	6	7.4	7.46		3.35	*Preliminary flow from Idaho Power Gage
1-Apr-03		10:45	2.81	0.301	0.37	2.2	2.2	0	301		247	7	8.2	913	3	8.6	8.1	7.87		1.01	*Preliminary flow from Idaho Power Gage
24-Apr-03		12:30	0.02	< 0.003	0.04	< 0.01	0.36	3.44	139		120	12	8.6	345	4	11.5	10.6	8.52		47.7	*Preliminary flow from Idaho Power Gage
12-May-03		9:30	0.02	< 0.003	0.038	< 0.01	0.33	2.46	132		112	11	8.5	310	4	11.8	9.8	8.1			
4-Jun-03		11:30	0.08	0.01	0.036	0.01	0.27	3.44	137		118	7	8.6	312	3						
18-Jun-03		10:14	0.17	0.034	0.055	0.01	0.24	0	166		136	3	8.3	371	2	19.4	8.6	8.07			
7-Jul-03		15:20	0.12	0.038	0.069	0.02	0.31	5.9	143		127	4	8.7	328	2	23.2	10.7	8.26			
McTucker Creek near ponds																					
11-Jun-01		12:25	2.9	0.038	0.05	< 0.01	0.12	0	272	498	223	< 1		815	< 1	11.8	11.7	7.64	836	17	
3-Jul-01		12:10	0.93	0.008	0.028	0.02	0.26	0	200	298	164	7		494	4	19.3	10.6	8.42	494		
2-Aug-01		10:45	0.86	0.006	0.013	0.02	0.37	2.45	199	297	167	5	8.4	508	< 1	16	12.5				
24-Aug-01		10:25	0.77	0.004	0.023	0.02	0.22	0	190	254	156	7	8.2	463	2						
18-Sep-01		12:10	0.73	0.006	0.031	0.02	0.3	1.47	191	277	159	6	8.4	471	1	15	12.3				
23-Oct-01		9:35	0.98	0.014	0.027	0.01	0.17	0	209	309	171	4	8.3	521	2	8	12.5				
27-Nov-01		9:40	1.06	0.019	0.024	< 0.01	0.15	0	202	307	166	3	8.3	511	1	3	12.5				
18-Dec-01		10:30	1.22	0.016	0.028	0.03	0.16	0	207	314	170	3	8.2	534	1	3	14				
16-Jan-02		10:20	1.29	0.025	0.034	0.02	NE ¹	0	207	311	170	4	8.2	536	2	3	12.5				
25-Feb-02		11:30	1.22	0.029	0.036	0.03	0.17	0	202	294	166	8	8.2	520	2	3					
25-Feb-02	Y	11:30	1.22	0.029	0.038	0.02	0.2	0	203	254	166	8	8.2	522	2						
26-Mar-02		13:25	1.06	0.016	0.031	0.01	0.2	0	200	296	164	11	8.3	501	2	8.6	13.2	8.36	530		
1-May-02		10:45	1.25	0.007	0.041	0.02	0.37	0	204	325	167	11	8.3	542	4	10.8	12.9	8.05	588	140	
4-Jun-02		14:15	0.47	< 0.003	0.04	< 0.01	0.32	6.36	155	242	138	20	8.7	407	5					300	Estimate
26-Jun-02		14:00	0.76	0.004	0.026	0.02	0.2	2.45	184	281	155	6	8.4	467	3					220	Estimate
9-Jul-02		13:45	0.83	0.007	0.039	0.04	0.22	3.43	187	303	159	7	8.5	478	2					270	Estimate
23-Jul-02		13:15	0.41	< 0.003	0.061	< 0.01	0.29	1.96	167	216	140	21	8.4	383	4	19.4	9.2	8.34	198		No flow data. Unsafe conditions to measure Q
13-Aug-02		13:15	0.44	0.004	0.026	< 0.01	0.24	1.96	168		141	6	8.4	399	2	18.3	10.5	8.51	189	200	Estimate
18-Sep-02		11:30	0.48	0.005	0.038	0.01	0.18	1.47	169		141	4	8.3	413	2	13	8.8	8.11	720		No flow data. Unsafe conditions to measure Q

American Falls Subbasin Assessment and TMDL

July 2004

Table E-1. Continued.

Date sampled	Replicate	Time sampled	NO ₃ +NO ₂ (mg/L)	Ortho P (mg/L)	Total P (mg/L)	NH ₃ (mg/L)	TKN (mg/L)	CO ₃ (mg/L)	HCO ₃ (mg/L)	TDS-180 (mg/L)	Alkalinity (mg/L)	SS (mg/L)	Lab pH (SU)	Lab EC (uS/cm)	Turbidity (NTU)	Field Temp (°C)	DO (mg/L)	Field pH (SU)	Field EC (uS/cm)	Flow (cfs)	Flow comments
McTucker Creek near ponds																					
9-Oct-02		13:15	1.06	0.015	0.035	0.02	0.2	0	213		175	2	8.3	540	1	11.7	11.5	8.29	514	160	Estimate
29-Oct-02		13:00	1.11	0.016	0.026	< 0.01	0.14	0	210		172	2	8.3	553	< 1	8	12.4	8.16	300	130	Estimate
29-Oct-02	Y	13:00	1.11	0.016	0.029	< 0.01	0.16	0	217		178	2	8.3	554	< 1					130	Estimate
25-Nov-02		15:00	0.95	0.011	0.019	< 0.01	0.1	1.47	197		164	4	8.4	505	1					120	Estimate
25-Nov-02	Y	15:00	0.93	0.012	0.022	0.01	0.12	1.96	197		165	4	8.5	505	1					121	Estimate
18-Dec-02		13:45	1.09	0.016	0.035	0.01	0.13	0	202		166	2	8.2	516	< 1	4.9	11	8.25	914		No flow data.
15-Jan-03		12:00	1.13	0.012	0.021	0.04	0.08	0	201		165	4	8.2	519	1	5					No flow data
10-Feb-03		11:30	1.42	0.013	0.037	0.02	0.16	0	218		179	4	8.2	576	1						No flow data
12-Mar-03		12:00	1.2	0.015	0.04	0.02	0.25	0	212		174	10	8.3	550	2	8.7	12	8.2		280	Estimate
1-Apr-03		13:45	1.13	0.023	0.049	0.02	0.26	1.48	205		171	11	8.4	524	3	9.6	11.3	8.11		200	Estimate
24-Apr-03		9:00	1.25	0.01	0.039	0.03	0.29	0	215		176	11	8	559	2	9.7	8.8	7.42		140	Estimate
12-May-03		13:00	1.19	< 0.003	0.047	0.03	0.21	0	211		173	5	8.3	554	2	13.6	13.2	8.2		270	Estimate
4-Jun-03		14:45	0.53	< 0.003	0.034	0.01	0.32	2.95	168		143	18	8.5	415	5						No flow data. Unsafe conditions to measure Q
18-Jun-03		13:45	0.43	< 0.003	0.045	0.02	0.3	0.98	178		148	18	8.4	422	4	19.4	10.3	8.42			No flow data.
8-Jul-03		9:00	0.56	< 0.003	0.02	0.01	0.21	0	183		150	6	8.3	432	2	17.3	7.7	6.5		300	Estimate
Mokins Creek																					
29-May-01		12:45	0.15	0.026	0.2	0.05	0.75	0	236	395	194	102		632	19	17.4	9.3	8.42	561	2.9	
Portneuf River																					
16-May-01		13:40	2.18	1.163	1.22	< 0.01	0.2	0.98	281	407	232	7	8.4	677	3	15.3	8.9	7.57	663		
30-May-01		11:20	2.47	1.356	1.36	0.19	0.39	0	294	413	241	8		675	2	14.3	9.6	7.64	665		
Schlitz Drain																					
15-May-01		9:20	0.01	0.003	0.056	< 0.01	0.3	0.98	157	224	130	27	8.4	371	9	14.7	7.8	8.6	369	6.7	
29-May-01		9:40	< 0.01	0.004	0.042	0.01	0.27	0	160	217	131	15		364	6	15.7	8.9	8.56	362	7.1	
Seagull Bay tributary at Frontage Road																					
30-May-01		9:40	0.28	0.038	0.131	0.03	0.33	0	199	312	163	54		533	17	10.8	10.6	8.28	531	3.4	
12-Jun-01		9:10	0.12	0.042	0.101	0.05	0.59	0	197	291	162	inferred by rerun		500	28	14.3	8.3	8.29	499	8.7	
2-Jul-01		10:05	0.18	0.068	0.164	0.03	0.39	0	202	286	166	56		464	18	19.3	8.8	8.55	476	6.1	
1-Aug-01		12:35	0.68	0.174	0.24	0.04	0.65	5.88	214	434	185	18	8.5	729	4	20	12.5				
22-Aug-01		12:35	0.47	0.149	0.193	0.08	0.66	0	220	375	180	14	8.2	603	12						
19-Sep-01		11:45	0.22	0.029	0.18	0.04	0.68	2.45	183	260	154	62	8.4	452	36	15	9.5				
2-May-02		10:30	0.13	0.03	0.98	0.08	1.38	4.41	205	271	175	1337	8.5	459	260	9.4	13	8.48	474	20	Estimate
4-Jun-02		10:00	0.01	0.051	0.106	< 0.01	0.36	1.96	188	260	157	58	8.4	455	18					6	Estimate
27-Jun-02		13:00	0.04	0.066	0.149	0.03	0.42	7.83	175	261	157	27	8.7	446	12					4	Estimate
9-Jul-02		10:15	0.29	0.109	0.22	0.04	0.5	2.94	196	320	166	71	8.5	521	32					1	Estimate
13-Aug-02		9:50	0.12	0.203	0.26	0.09	0.88	1.96	200		167	13	8.4	452	10	16.4	9.4	8.47	210	2	Estimate
13-Aug-02	Y	9:50	0.12	0.195	0.25	0.12	0.9	1.96	198		166	14	8.4	451	11					2	Estimate
17-Sep-02		9:40	0.71	0.024	0.087	0.05	0.42	3.43	170		145	26	8.5	467	9	15.6	8	8.28	81	6	Estimate
12-May-03		14:45	< 0.01	< 0.003	0.125	0.03	0.5	4.43	188		162	52	8.6	451	24	17.7	8.8	8.39		2	Estimate
4-Jun-03		10:45	0.02	0.051	0.089	0.02	0.32	0	200		164	10	8.3	469	7					0.5	Estimate
Spring Creek at Sheepskin Road																					
16-May-01		12:40	0.97	0.013	0.031	< 0.01	0.14	2.45	224	291	188	24	8.5	480	4	12.7	10.2	8.28	476	346	from USGS web history
30-May-01		12:40	1	0.013	0.027	< 0.01	0.1	0	228	293	187	12		477	2	12.7	12.2	8.39	475	341	from USGS web history
12-Jun-01		11:20	0.99	0.007	0.027	0.11	0.11	0	230	287	189	8		480	2	11	10	8.24	484	319	from USGS web history
2-Jul-01		12:05	1.08	0.008	0.024	< 0.01	0.09	0	228	286	187	4		466	2	13.6	11.1	8.41	471	327	from USGS web history
24-Oct-01		9:50	1.04	0.013	0.044	0.01	0.27	0	232	294	190	4	8.2	480	2	8	11			335	from USGS web history
24-Oct-01	Y	9:50	1.04	0.013	0.051	0.01	0.22	0	233	294	191	6	8.2	486	2					335	from USGS web history
28-Nov-01		9:40	1.06	0.012	0.018	< 0.01	0.1	0	234	294	192	4	8.2	488	2	6	12			348	from USGS web history
19-Dec-01		9:40	1.06	0.017	0.038	0.02	0.5	0	232	296	190	9	8.1	492	3	8	10.5			351	from USGS web history
16-Jan-02		11:30	1.63	0.016	0.031	0.03	NE ¹	2.45	294	335	245	10	8.4	551	2	5	12			342	from USGS web history
25-Feb-02		10:30	0.99	0.011	0.02	0.01	0.16	0	234	288	192	10	8.3	494	2	4				308	from USGS web history
26-Mar-02		10:40	1	0.013	0.024	< 0.01	0.24	1.96	230	285	192	21	8.4	487	3	9.8	11.1	8.33	507	326	from USGS web history
26-Mar-02	Y	10:40	1	0.013	0.024	< 0.01	0.2	2.45	229	293	192	21	8.4	488	3					326	from USGS web history
1-May-02		14:00	0.89	0.005	0.012	< 0.01	0.13	3.43	218	288	184	8	8.5	409	3	11	16.8	8.51	482	311	from USGS web history
4-Jun-02		12:30	0.84	0.005	0.014	< 0.01	0.12	4.9	218	291	187	7	8.6	475	2					301	from USGS web history
26-Jun-02		13:30	0.84	0.008	0.024	0.01	0.09	2.94	220	280	185	5	8.4	466	1					283	from USGS web history
9-Jul-02		12:30	0.93	0.01	0.022	0.02	0.08	2.94	223	299	188	7	8.5	473	< 1					272	from USGS web history
23-Jul-02		12:00	0.94	0.007	0.022	< 0.01	0.08	2.45	224	280	188	2	8.4	472	< 1	13.1	11.2	8.28	239	274	from USGS web history

American Falls Subbasin Assessment and TMDL

July 2004

Table E-1. Continued.

Date sampled	Replicate	Time sampled	NO ₃ +NO ₂ (mg/L)	Ortho P (mg/L)	Total P (mg/L)	NH ₃ (mg/L)	TKN (mg/L)	CO ₃ (mg/L)	HCO ₃ (mg/L)	TDS-180 (mg/L)	Alkalinity (mg/L)	SS (mg/L)	Lab pH (SU)	Lab EC (u S/cm)	Turbidity (NTU)	Field Temp (°C)	DO (mg/L)	Field pH (SU)	Field EC (uS/cm)	Flow (cfs)	Flow comments
Spring Creek at Sheepskin Road																					
13-Aug-02		12:40	0.84	0.006	0.014	< 0.01	0.11	0	227		186	5	8.3	467	1	12.4	11.2	8.29	216	287	from USGS web history
17-Sep-02		14:30	0.9	0.005	0.027	0.01	0.11	4.41	217		185	4	8.5	472	1	11.2	12.3	8.41	84	302	from USGS web history
9-Oct-02		11:15	0.93	0.009	0.017	0.02	0.12	0	229		188	5	8.3	476	1	9.7	11.1	8.29	466	315	from USGS web history
29-Oct-02		11:20	1	0.008	0.021	0.01	0.1	0.49	226		186	6	8.4	478	2	9.4	11.2	8.16	269	313	from USGS web history
26-Nov-02		8:45	1.04	0.012	0.022	< 0.01	0.12	0	233		191	10	8.1	486	3					306	from USGS web history
18-Dec-02		11:40	1.04	0.013	0.036	0.01	0.08	0	229		188	8	8.3	482	2	7.5	9.5	8.17	860	310	from USGS web history
Spring Hollow																					
15-May-01		8:50	0.01	0.003	0.078	< 0.01	0.59	1.47	156	218	130	38	8.4	372	10	15.3	8.2	8.7	367		
29-May-01		8:50	0.01	0.004	0.038	0.01	0.25	0	157	207	129	18		358	6	16.3	8.4	8.55	361	1.6	
Sterling Wasteway																					
16-May-01		9:05	1.63	0.019	0.053	< 0.01	0.34	2.45	266	401	222	13	8.5	647	6	11.6	11.1	8.28	634	2.8	
16-May-01	Y	9:10	1.66	0.02	0.06	< 0.01	0.35	3.43	262	407	221	12	8.4	644	6	11.6	11.1	8.3	634	2.8	
29-May-01		12:15	0.69	0.019	0.075	0.03	0.42	0	249	359	204	22		578	8	16.6	12.4	8.62	579	6.6	
11-Jun-01		10:20	1.27	0.006	0.042	< 0.01	0.34	0	270	384	221	7		611	3	14.5	14.8	8.72	611	2.1	
3-Jul-01		10:35	0.58	0.015	0.049	0.03	0.45	0	255	369	209	11		567	6	18.4	10	8.47	569	7	
2-Aug-01		9:00	0.7	0.008	0.031	0.02	0.28	3.43	266	346	224	8	8.5	591	1	14	11.5				
24-Aug-01		9:20	0.38	0.008	0.03	0.02	0.33	0	252	334	207	10	8.2	541	3						
18-Sep-01		11:05	1.03	0.008	0.053	0.05	0.48	2.94	255	357	214	12	8.5	580	4	13	12.5				
23-Oct-01		8:50	1.23	0.025	0.103	0.11	0.43	0	273	372	224	30	8.3	595	17	6	12.2				
27-Nov-01		10:30	1.51	0.036	0.118	0.08	0.38	1.47	277	391	230	26	8.4	630	11	1	14				
16-Jan-02		9:40	1.71	0.045	0.144	0.16	NE ¹	0	283	377	232	103	8.3	646	36	0	13.5				
16-Jan-02	Y	9:40	1.71	0.045	0.156	0.15	NE ¹	0	287	292	235	108	8.3	646	36						
25-Feb-02		12:30	1.42	0.083	0.39	1.36	3.72	0	320	496	262	159	8.1	819	64	3					
26-Mar-02		14:49	1.64	0.058	0.146	0.15	0.6	0	299	464	245	65	8.3	754	24	15	9.7	8.29	787		
1-May-02		9:00	1.54	0.016	0.038	< 0.01	0.36	0	283	402	232	14	8.3	648	6	6.2	14.9	8.23	675	5	Published flow by Idaho Power
3-Jun-02		14:15	1.64	0.006	0.04	0.02	0.53	15.2	241	418	223	14	9.9	668	4					1.9	Published flow by Idaho Power
26-Jun-02		15:15	0.23	0.011	0.051	0.05	0.4	7.83	229	335	201	15	8.7	541	3					13	Published flow by Idaho Power
10-Jul-02		9:00	1.24	0.013	0.035	0.02	0.45	0	291	405	239	12	8.3	654	4					1.1	Published flow by Idaho Power
23-Jul-02		15:30	1.11	0.01	0.032	0.02	0.44	24	206	386	209	4	9.1	593	2	24.7	11.7	8.97	302	0.86	Published flow by Idaho Power
12-Aug-02		11:15	0.11	0.006	0.034	0.03	0.38	7.34	228		199	6	8.6	512	2	16.6	10.5	8.57	235	14	Published flow by Idaho Power
28-Aug-02		13:25	1.24	0.009	0.026	< 0.01	0.3	11.8	271		242	4	8.7	674	1	18	10	8.56	596	2	Published flow by Idaho Power
18-Sep-02		12:40	0.95	0.006	0.022	0.01	0.23	6.85	258		223	3	8.6	594	2	12.7	11.5	8.34	1029	3.5	Published flow by Idaho Power
8-Oct-02		11:45	0.9	0.018	0.042	0.06	0.35	0	262		215	8	8.3	575	4	10.15	11.15	8.18	558	9.84	*Preliminary flow from Idaho Power Gage
5-Nov-02		11:00	1.31	0.033	0.083	0.12	0.47	0	266		218	34	8.3	599	13	3.4	12.5	8.25	337	5.77	*Preliminary flow from Idaho Power Gage
25-Nov-02		12:50	1.38	0.027	0.083	0.06	0.34	4.41	263		223	35	8.6	621	9					5.4	*Preliminary flow from Idaho Power Gage
17-Dec-02		16:00	1.24	0.033	0.117	0.09	0.42	1.47	256		212	55	8.4	616	14	3.6	11.8	8.25	1101	5.99	*Preliminary flow from Idaho Power Gage
15-Jan-03		10:30	1.37	0.028	0.07	0.12	0.36	0	271		222	45	8.2	674	12	4				5.34	*Preliminary flow from Idaho Power Gage
10-Feb-03		10:37	1.46	0.032	0.133	0.19	1.32	0	296		243	197	8.2	631	65					4.86	*Preliminary flow from Idaho Power Gage
12-Mar-03		10:15	1.52	0.04	0.28	0.26	1.52	0	299		245	198	8.2	651	66	7.8	10.3	8.02		5.66	*Preliminary flow from Idaho Power Gage
1-Apr-03		11:45	1.36	0.033	0.121	0.07	0.64	3.94	273		230	52	8.5	626	19	8.6	10.9	8.07		5.32	*Preliminary flow from Idaho Power Gage
24-Apr-03		10:30	1.07	< 0.003	0.094	0.06	0.62	0	258		212	26	8.2	590	8	8.8	11.2	8		6.83	*Preliminary flow from Idaho Power Gage
12-May-03		10:30	1.8	< 0.003	0.034	0.01	0.27	0	298		244	6	8.3	692	2	9.9	14.4	8.27			
4-Jun-03		13:00	0.53	< 0.003	0.029	0.02	0.43	10.3	208		188	11	8.8	528	3						
18-Jun-03		11:30	0.32	0.004	0.041	0.04	0.55	1.48	239		198	15	8.4	545	3	19.6	10	8.26			
7-Jul-03		16:10	0.73	0.012	0.043	0.05	0.43	21.2	207		205	8	9	551	4	23.8	13.6	8.45			
Sunbeam Creek at Frontage Road																					
30-May-01		8:50	0.2	0.015	0.37	0.02	0.83	0	227	296	186	332		496	99	9.8	9.9	8.31	504	6.2	
12-Jun-01		8:25	0.18	0.038	1.08	0.07	1.22	0	233	285	191	191	by rerun	470	155	13.8	8.4	8.28	474	7.2	
2-Jul-01		9:15	0.07	0.02	0.085	< 0.01	0.24	0	220	303	180	31		502	17	19.6	8.9	8.51	511	3.7	
2-Jul-01	Y	9:15	0.08	0.02	0.086	< 0.01	0.26	0	220	306	180	31		507	17	19.6	8.9	8.51	511	3.7	
1-Aug-01		12:05	0.04	0.051	0.18	0.02	0.32	13.2	179	282	169	106	8.6	472	9	18	8.9				
22-Aug-01		12:00	0.15	0.059	0.35	0.09	0.79	1.47	216	305	180	222	8.4	490	73						
19-Sep-01		8:30	0.07	0.031	0.24	0.05	0.7	0.98	210	295	174	133	8.4	489	68	10.5	10				
24-Oct-01		8:20	< 0.01	0.022	0.18	< 0.01	0.52	0.98	254	350	210	81	8.4	591	49	2	13.5				
2-May-02		10:00	0.01	0.014	0.107	< 0.01	0.3	2.45	201	305	169	57	8.4	515	34	9	13.5	8.35	535	1.5	Estimate
4-Jun-02		9:30	0.05	0.035	0.22	0.01	0.65	3.43	208	287	176	98	8.5	491	54					4	Estimate
27-Jun-02		12:00	0.42	0.076	0.2	0.11	0.92	7.34	189	270	167	57	8.7	460	32					7	Estimate
9-Jul-02		9:45	0.45	0.109	0.3	0.08	0.98	1.47	194	299	162	87	8.4	469	72					5	Estimate

Table E-1. Continued.

Date sampled	Replicate	Time sampled	NO ₃ +NO ₂ (mg/L)	Ortho P (mg/L)	Total P (mg/L)	NH ₃ (mg/L)	TKN (mg/L)	CO ₃ (mg/L)	HCO ₃ (mg/L)	TDS-180 (mg/L)	Alkalinity (mg/L)	SS (mg/L)	Lab pH (SU)	Lab EC (u S/cm)	Turbidity (NTU)	Field Temp (°C)	DO (mg/L)	Field pH (SU)	Field EC (uS/cm)	Flow (cfs)	Flow comments
Sunbeam Creek at Frontage Road																					
24-Jul-02		8:00	0.63	0.074	0.32	0.02	1.8	0.98	223	279	185	126	8.4	485	90	19.7	6.7	8.28	245	10	Estimate
13-Aug-02		9:15	0.27	0.079	0.146	0.1	0.52	0	214		175	17	8.2	466	21	15.9	7.7	8.25	216	4	Estimate
28-Aug-02		9:45	0.35	0.071	0.28	0.11	0.33	2.45	223		187	103	8.5	478	76	14.5	6.8	8.01	425	3	Estimate
17-Sep-02		9:15	0.12	0.035	0.088	0.04	0.3	1.96	211		176	70	8.4	483	49	14.3	8.2	8.05	88	2	Estimate
9-Oct-02		9:15	0.05	0.025	0.33	0.03	0.9	2.45	241		202	150	8.4	542	102	5.7	10.6	8.45	528	1	Estimate
12-May-03		15:15	<0.01	0.007	0.094	0.02	0.27	9.35	192		173	45	8.7	500	26	18.3	9.9	8.61		1	Estimate
4-Jun-03		10:00	0.02	0.041	0.122	0.04	0.42	0	206		169	48	8.3	480	18					4	Estimate
18-Jun-03		9:04	0.17	0.012	0.072	<0.01	0.5	0.98	204		169	27	8.4	491	10	16.9	8.3	7.95		10	Estimate
7-Jul-03		14:45	1.36	0.081	0.163	0.78	2.72	16.7	169		166	16	9	470	23	23.3	13.9	8.5		1	Estimate
Tarter Waste																					
15-May-01		10:20	0.01	0.003	0.035	<0.01	0.31	0.98	160	229	133	8	8.4	375	5	14.5	8.4	8.5	375	3.2	
29-May-01		10:10	<0.01	0.003	0.03	0.01	0.27	0	159	215	130	9		364	5	15.9	10.3	8.67	364	4.1	
29-May-01	Y	10:15	<0.01	0.003	0.036	0.02	0.26	0	159	216	130	9		363	5	15.9	10.3	8.66	364	4.1	
Snake River at Tilden Bridge																					
27-Nov-01		9:10	0.17	0.008	0.016	<0.01	0.3	1.47	147	211	123	2	8.4	343	1	1					

¹NE=not entered

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Table E-2. Sampling data from streams, canals, and wetlands on north and west sides of American Falls Reservoir, 1997 to 2000.

Waterbody	Type	Sample date	Duplicate sample number			Suspended sediment (mg/L)			PO ₄ as P (mg/L)			NO ₃ +NO ₂ as N (mg/L)			Flow (L/sec)
			0	1	2	0	1	2	0	1	2	0	1	2	
Firth River Bridge	canal	19-Jun-97		2247	2248		82.49	77.68		0.01	-0.01		0.09	0.06	
Firth River Bridge	canal	2-Aug-97		2287	2288		6.39	6.82		-0.03	-0.03		0.07	0.06	
People River	canal	12-Apr-97	2152			10.6			0.04			0.94			
People River	canal	21-Apr-97	2161			36.3			0			0.65			
People River	canal	8-May-97		2168	2169		331.08	373.12		-0.04	-0.02		0.31	0.36	
People River	canal	26-May-97		2216	2217		59.2	20.64		0.02	0.02		0.19	0.19	
People River	canal	11-Jun-97		2245	2246		86.98	93.82		0.02	0.03		0.24	0.18	
People River	canal	29-Aug-97		2331	2332		2.58	2.83		0	-0.01		0.04	0.03	
People River	canal	29-Sep-97		2376	2377		4.3	4.64		0.07	0.05		0.09	0.08	
H Canal	canal	13-May-97		2176	2177		17.4	17.04		-0.04	-0.04		0.03	0.02	
H Canal	canal	2-Jun-97		2208	2214		43.92	44.08		-0.01	0.01		0.19	0.2	
H Canal	canal	7-Sep-97		2341	2342		4.58	6.16		0.01	-0.01		0.03	0.03	
H Lake	canal	13-May-97		2180	2181		18.96	19.28		-0.01	-0.01		0.56	0.78	
H Lake	canal	2-Jun-97		2205	2215		59.96	62.04		0.06	0.02		0.24	0.24	
H Lake	canal	7-Aug-97		2305	2306		8.39	8.66		-0.02	0		0	0.01	
H Lake	canal	7-Sep-97		2343	2344		7.3	8.23		0.03	0.03		0.1	0.13	
HV	canal	2-Jun-97		2207	2212		25.64	23.88		-0.01	0		0.15	0.12	
Q1 Spill	canal	2-Jun-97		2210	2218		28.68	36.44		-0.02	-0.01		0.22	0.08	
Q1 Spill	canal	11-Aug-97		2311	2312		2.93	2.19		-0.02	0.01		0	0.01	
Q1 Spill	canal	7-Sep-97		2349	2350		1.46	1.93		-0.01	-0.01		0.02	0.02	
Q1 Spill	canal	25-Sep-97		2372	2373		2.62	3.69		0	0.01		0.04	0	
T Canal	canal	13-May-97		2172	2173		33.72	33.28		-0.05	-0.07		0.02	0.03	
T Canal	canal	2-Jun-97		2206	2213		50.16	51.56		0	0		0.21	0.2	
T Canal	canal	26-Jun-97		2251	2252		37.7	38.72		-0.02	0.01		0	0	
T Canal	canal	7-Aug-97		2307	2308		9.28	9.81		0.03	0		0	0.01	
T Canal	canal	7-Sep-97		2347	2348		4.91	5.54		0.05	0.01		0.03	0.04	
T Canal	canal	3-Oct-97		2378	2379		2.85	3.18		0	-0.01		0.03	0.03	
T Lake	canal	13-May-97		2174	2175		32	30.88		-0.06	-0.01		0.02	0.01	
T Lake	canal	2-Jun-97		2209	2211		53.36	45		0.02	0.01		0.17	0.23	
T Lake	canal	12-Jun-97		2382	2383		0	0		0.05	-0.01		0	0	
V Spill	canal	13-May-97		2178	2179		13.52	13.92		-0.05	-0.01		0.03	0.02	
V Spill	canal	7-Aug-97		2309	2310		4.35	3.67		0.03	0.01		0.02	0.01	
V Spill	canal	7-Sep-97		2345	2346		1.64	1.76		-0.02	-0.02		0.03	0.05	
T Canal	run-off	31-Dec-96	2141			2430.5			1.2			1.8			
Schritter	run-off	31-Dec-96	2142			192			0			0			
T Povey	run-off	31-Dec-96	2143			8398.5			2.2			2.77			
Rain	rain	12-Jun-97	2244			26.73			-0.08			0.19			
T Povey Rain	run-off	12-Jun-97		2249	2250		1186.9	1203.1		0.54	0.42		2.92	2.92	
Rain water-thunderstorm	rain	11-Sep-97		2351	2352		13.72	10.43		0.16	0.15		0.41	0.42	
American Game	spring	21-Apr-97	2154			1.96			0.07			3.9			
American Game	spring	2-Aug-97		2303	2304		10.23	1.82		0.18	0.19		2.92	2.92	
Big Hole at Fingal Road	spring	2-Apr-97	2147			0.56			0.07			4.59			
Big Hole at Fingal Road	spring	21-Apr-97	2157			1.36			0.1			5.26			
Christiansen Drain	spring	2-Apr-97	2151			-1.06			0.19			1.98			
Christiansen Drain	spring	2-Aug-97		2299	2300		2.07	1.79		0.03	0.09		0.25	0.25	
Comforth Spring	spring	2-Apr-97	2150			14.63			0.2			3.52			
Crystal Springs	spring	2-Aug-97		2289	2290		4.46	4.21		0.03	-0.04		2.62	2.22	
Danielson	spring	21-Apr-97	2158			13.33			-0.01			1.16			
Danielson Creek	spring	2-Aug-97		2291	2292		10.25	7.71		0	0		0.65	0.73	
Driscoll Spring	spring	2-Apr-97	2149			4.92			0			4			
Driscoll Spring	spring	2-Aug-97		2295	2296		1.57	1.68		0.26	0.17		2.92	2.85	
Spring Hollow Highway	spring	24-Apr-97		2162	2163		74.32	71.6		0.1	0.11		20.78	22.77	
Spring Hollow Highway	spring	7-Sep-97		2335	2336		11.3	9.81		0.01	0.02		2.92	2.92	
Spring Hollow Drain	spring	7-Sep-97		2339	2340		10.8	10.72		0	0		0.03	0.01	
Spring Hollow Spring	spring	7-Sep-97		2337	2338		10.49	9.32		0.04	0.05		3	2.92	
Spring Hollow Spring	spring	24-Apr-97		2164	2165		6	5.84		0.23	0.24		27.18	24.38	
Smith	spring	21-Apr-97	2155			7.46			0.08			0.02			
Smith	spring	2-Aug-97		2301	2302		24.7	31.89		0.07	0.1		0.06	0.06	
Smith 2350W 1400S	spring	27-Mar-97	2146			8.5			0.66			2.56			
Ster West Lake	spring	21-Apr-97	2160			13.74			0.06			1.91			
Sterling West	spring	21-Apr-97	2153			2.15			0.06			4.7			
Sterling East	spring	21-Apr-97		2166	2167		16.94	20.28		0.04	0		-0.03	0.06	
Sterling South Lake	spring	2-Aug-97		2293	2294		6.46	6.93		0.02	0.27		0.43	0.42	
Yuma	spring	21-Apr-97	2159			58.48			0			2.65			
Orth	wetland	21-Apr-97	2156			21.74			0.16			-0.65			
Orth Wetland	wetland	2-Apr-97	2148			28.06			0.04			-0.27			
Orth Wetland	wetland	2-Aug-97		2297	2298		16.18	14.32		0.03	0.02		0.05	0.03	
ARS Double di	misc	21-Apr-97	2197			0			-0.09			-0.57			
ARS Raw	misc	21-Apr-97	2201			0			0.08			-0.55			
ARS RO Unit di	misc	21-Apr-97	2199			0			-0.08			-0.75			
People River	canal	5-May-98		2463	2482		47.83	46.11		0.05	0.05		0.17	0.24	
People River	canal	19-May-98		2504	2520		33.11	31.92		0.09	0.03		0.18	0.19	
People River	canal	3-Jun-98		2550	2552		30.01	31.84		0.04	0.02		0.08	0.07	
People Canal	canal	15-Jun-98		2575	2590		21.82	25.38		0.05	0.03		0.08	0.08	
People Canal	canal	30-Jun-98		2632	2637		18.58	18.79		0.05	0.05		0.03	0.03	
People River	canal	14-Jul-98		2650	2659		9.58	10.07		0.03	0.02		0.08	0.09	
People River	canal	4-Aug-98		2695	2700		5.81	5.69		0.01	0.02		0.01	0.01	
People River	canal	25-Aug-98		2719	2727		4.97	4.7		0.03	0.05		0.05	0.05	
People River	canal	14-Sep-98		2788	2790		4.74	4.39		0.06	0.04		0.16	0.14	
People's Canal	canal	5-Oct-98		2817	2822		2.59	13.16		0.23	-0.04		0.05	0.04	

Table E-2. Continued.

Waterbody	Type	Sample date	Duplicate sample number			Suspended sediment (mg/L)			PO ₄ as P (mg/L)			NO ₃ +NO ₂ (mg/L)			Flow (L/sec)
			0	1	2	0	1	2	0	1	2	0	1	2	
ASCC River Gate	canal	5-May-98		2457	2468		41.34	40.15		0.04	0.06		0.21	0.18	
ASCC River Gate	canal	19-May-98		2511	2518		33.59	36.28		0.02	0.06		0.16	0.17	
ASCC River Gate	canal	3-Jun-98		2537	2543		35.5	33.21		0.04	0.04		0.08	0.1	
ASCC River Gate	canal	15-Jun-98		2574	2588		21.58	24.09		0.07	0.03		0.08	0.11	
ASCC River Gate	canal	30-Jun-98		2630	2634		18.84	19.82		0.05	0.06		0.04	0.03	
ASCC River Gate	canal	14-Jul-98		2645	2654		9.19	9.17		0.03	0.03		0.08	0.1	
ASCC River Gate	canal	4-Aug-98		2672	2681		5.77	5.51		0.02	0.02		0.01	0.02	
ASCC River Gate	canal	25-Aug-98		2721	2726		4.82	5.04		0.04	0.05		0.06	0.04	
ASCC River Gate	canal	14-Sep-98		2783	2793		5.08	4.27		0.05	0.08		0.17	0.16	
ASCC River Gate	canal	5-Oct-98		2818	2820		3	3.28		0.15	0.11		0.07	0.07	
Radio Gauge	canal	5-May-98		2461	2467		47.68	45.95		0.02	0.05		0.16	0.16	
Radio Gauge	canal	19-May-98		2507	2513		33.81	32.72		0.07	0.05		0.16	0.16	
Radio Gauge	canal	3-Jun-98		2540	2548		37.03	35.52		0.03	0.03		0.08	0.08	
Radio Gauge	canal	15-Jun-98		2577	2585		23.1	24.52		0.04	0.03		0.07	0.08	
Radio Gauge	canal	30-Jun-98		2612	2629		17.59	18.1		0.03	0.07		0.04	0.02	
Radio Gauge	canal	14-Jul-98		2649	2658		8.78	9.35		0.03	0.03		0.05	0.08	
Radio Gauge	canal	4-Aug-98		2671	2682		6.61	10.94		0	0.01		-0.01	0.01	
Radio Gauge	canal	25-Aug-98		2716	2729		6.36	5.72		0.07	0.05		0.06	0.08	
Radio Gauge	canal	14-Sep-98		2786	2787		4.42	4.37		0.07	0.07		0.14	0.17	
Radio Gauge	canal	5-Oct-98		2802	2812		2.52	2.64		0.16	0.11		0.03	0.04	
Big Fill	canal	5-May-98		2460	2484		11.4	10.73		0.03	0.06		0.06	0.13	
Big Fill	canal	19-May-98		2505	2514		17.95	19.4		0.06	0.03		0.12	0.09	
Big Fill	canal	3-Jun-98		2545	2549		35.34	27.92		0.05	0.04		0.05	0.07	
Big Fill	canal	15-Jun-98		2576	2581		25.02	27.58		0.03	0.04		0.05	0.06	
Big Fill	canal	30-Jun-98		2617	2636		20.71	17.61		0.03	0.06		-0.01	0	
Big Fill	canal	14-Jul-98		2643	2652		15.37	11.8		0.07	0.03		0.01	0.01	
Big Fill	canal	4-Aug-98		2670	2704		11.24	9.16		-0.02	0.03		0	-0.01	
Big Fill	canal	25-Aug-98		2717	2724		2.57	2.76		0.06	0.1		-0.01	0	
Big Fill	canal	14-Sep-98		2781	2791		2.5	2.47		0.05	0.05		0.07	0.07	
Big Fill	canal	5-Oct-98		2803	2814		0.99	1.6		0.18	0.12		0	-0.01	
V Spill	canal	5-May-98		2483	2490		10.89	9.96		0.09	0.06		0.03	0.05	
V Spill	canal	19-May-98		2509	2515		20.05	19.84		0.04	0.02		0.04	0.05	
V Spill	canal	3-Jun-98		2555	2560		15.86	14.75		0.04	0.04		0.04	0.02	
V Spill	canal	15-Jun-98		2582	2587		7.48	7.58		0.03	0.04		-0.01	-0.01	
V Spill	canal	30-Jun-98		2600	2609		4.87	4.52		0.03	0.04		-0.01	-0.01	
V Spill	canal	14-Jul-98		2647	2656		2.72	1.86		0.05	0.04		-0.01	0	
V Spill	canal	4-Aug-98		2683	2691		3.58	2.83		0.01	0.04		-0.01	0	
V Spill	canal	25-Aug-98		2720	2728		1.19	1.23		0.07	0.06		0	0	
V Spill	canal	14-Sep-98		2744	2784		0.92	0.86		0.06	0.18		0	0	
V Spill	canal	5-Oct-98		2801	2806		0.84	0.56		0.18	0.08		0	-0.01	
Hazard Creek	canal	5-May-98		2491	2492		61.47	67.9		0.07	0.06		0.05	0.04	2250
Hazard Creek	canal	19-May-98		2506	2516		22.68	22.86		0.1	0.08		0.19	0.18	503
Hazard Creek	canal	3-Jun-98		2558	2563		17.1	19.5		0.09	0.07		0.11	0.13	2700
Hazard Creek	canal	15-Jun-98		2579	2591		15.58	18.84		0.09	0.05		0.02	0.02	2400
Hazard Creek	canal	30-Jun-98		2605	2606		8.92	9.89		0.09	0.12		0.07	0.07	2520
Hazard Creek	canal	14-Jul-98		2648	2657		3.24	9.06		0.13	0.14		0.45	0.35	
Hazard Creek	canal	4-Aug-98		2673	2690		24.75	62.97		0.07	0.11		0.47	0.48	4200
Hazard Creek	canal	25-Aug-98		2718	2730		163.52	155.9		0.11	0.09		0.16	0.18	2000
Hazard Creek	canal	14-Sep-98		2745	2794		8.76	6.68		0.04	0.05		0.08	0.13	1800
Hazard Creek	canal	5-Oct-98		2808	2810		9.05	9.4		0.22	0.22		0.25	0.18	1500
Wilson Spill	canal	5-May-98		2480	2486		14.45	13.3		0.06	0.07		0.08	0.01	
Wilson Spill	canal	19-May-98		2512	2519		13.04	12.33		0.06	0.02		0.07	0.06	
Wilson Spill	canal	3-Jun-98		2561	2565		27.55	26.07		0.04	0.04		0.04	0.05	
Wilson Spill	canal	15-Jun-98		2580	2586		13.99	14.07		0.06	0.02		-0.01	-0.01	
Wilson Spill	canal	30-Jun-98		2603	2610		10.27	10.61		0.04	0.06		-0.01	-0.01	
Wilson Spill	canal	14-Jul-98		2646	2655		5.68	5.8		0.06	0.02		-0.01	0	
Wilson Spill	canal	4-Aug-98		2684	2696		5.53	3.24		0.05	0.01		0	-0.01	
Wilson Spill	canal	25-Aug-98		2723	2732		1.48	1.1		0.15	0.05		0	-0.01	
Wilson Spill	canal	14-Sep-98		2782	2789		2.87	2.57		0.04	0.04		0.02	0.01	
Wilson Spill	canal	5-Oct-98		2805	2807		1.23	1.06		0.09	0.08		0	0	
Cedar Spill	canal	5-May-98		2469	2487		20.68	20.86		0.02	0.05		0.04	0.04	
Cedar Spill	canal	19-May-98		2503	2508		12.62	12.83		0.12	0.03		0.05	0.04	
Cedar Spill	canal	3-Jun-98		2553	2562		44.61	37.82		0.04	0.02		0.04	0.05	
Cedar Spill	canal	15-Jun-98		2578	2584		17.87	17.47		0.01	0.02		-0.01	0.01	
Cedar Spill	canal	30-Jun-98		2602	2608		14.54	15.58		0.01	0.03		-0.01	-0.01	
Cedar Spill	canal	14-Jul-98		2644	2653		12.18	11.84		0.04	0.02		0	0	
Cedar Spill	canal	4-Aug-98		2686	2694		6.63	6.22		0.02	0.03		0	0	
Cedar Spill	canal	25-Aug-98		2722	2731		2.58	3.06		0.04	0.1		0	-0.01	
Cedar Spill	canal	14-Sep-98		2785	2792		2.87	2.58		0.08	0.04		-0.01	0	
Cedar Spill	canal	5-Oct-98		2804	2809		2.39	2.61		0.11	0.13		-0.01	0	
Danielson	spring	5-May-98		2466	2471		42.6	16.38		0.09	0.06		1.6	1.55	
Danielson	spring	3-Jun-98		2533	2539		10.59	11.08		0.05	0.07		0.85	1.12	2400
Danielson	spring	30-Jun-98		2604	2633		18.21	13.69		0.01	0.08		0.69	0.8	240
Danielson	spring	4-Aug-98		2676	2693		5.72	5.99		0.07	0.11		0.79	0.85	2200
Danielson	spring	14-Sep-98		2755	2776		0	0		0	0		1.46	1.01	2000
Danielson	spring	18-Dec-98		2849	2851		0	0		0.1	0.06		1.89	1.34	
Crystal	spring	5-May-98		2470	2473		2.01	2.64		0.06	0.11		3.79	3.48	3750
Crystal	spring	3-Jun-98		2531	2541		1.84	2.01		0.06	0.05		3.71	4.8	4500
Crystal	spring	30-Jun-98		2613	2622		3.38	2.52		0.04	0.09		4.32	4.5	1280
Crystal	spring	4-Aug-98		2675	2679		5.75	4.74		0.08	0.09		3.55	3.67	900
Crystal	spring	14-Sep-98		2754	2777		0	0		0	0		2.01	2.19	10800

Table E-2. Continued.

Waterbody	Type	Sample date	Duplicate sample number			Suspended sediment (mg/L)			PO ₄ as P (mg/L)			NO ₃ +NO ₂ (mg/L)			Flow (L/sec)
			0	1	2	0	1	2	0	1	2	0	1	2	
Driscoll Spring	spring	5-May-98		2475	2489		3.4	1.81		0.15	0.21		6.61	6.28	108
Driscoll Spring	spring	3-Jun-98		2529	2551		4.82	5.2		0.16	0.09		6.06	6.41	30
Driscoll Spring	spring	30-Jun-98		2615	2621		2.8	3.19		0.15	0.1		5.03	4.27	36
Driscoll Spring	spring	4-Aug-98		2677	2680		1.81	2.46		0.53	0.09		6.17	6.36	9
Driscoll Spring	spring	14-Sep-98		2757	2775		0	0		0	0		5.29	6.58	126
Driscoll Spring	spring	9-Nov-98		2827	2841		0	0		0	0		6.64	6.67	180
Smith wetland spring	spring	5-May-98		2465	2476		21.89	19.59		0.2	0.08		0.33	0.46	30
Smith Spring	spring	3-Jun-98		2532	2542		5.57	5.93		0.04	0.07		0.03	0.03	400
Smith Spring	spring	30-Jun-98		2601	2625		8.64	8		0.1	0.11		0.04	0.04	100
Smith Spring	spring	4-Aug-98		2702	2705		4.19	4.04		0.13	0.07		0	0	270
Smith Spring	spring	14-Sep-98		2749	2751		0	0		0	0		0.03	0.02	48
Smith Spring	spring	9-Nov-98		2834	2839		0	0		0	0		1.22	0.6	18
Cornforth Spring	spring	5-May-98		2464	2481		1.64	2.02		0.12	0.13		5.58	4.5	14
Cornforth Spring	spring	3-Jun-98		2554	2559		2.33	2.85		0.31	0.28		1.86	2.19	30
Cornforth Spring	spring	30-Jun-98		2614	2624		1.81	1.27		0.22	0.28		1.41	1.7	198
Cornforth Spring	spring	4-Aug-98		2689	2706		7.58	6.52		0.16	0.16		2.53	1.96	24
Cornforth Spring	spring	14-Sep-98		2746	2750		0	0		0	0		0.18	0.19	15
Cornforth Spring	spring	9-Nov-98		2826	2828		0	0		0	0		0.81	0.82	12
Sportsman Park North Spring	spring	9-Nov-98		2832	2835		0	0		0	0		5.6	3.72	20
Poulson Spring	spring	15-Sep-98		2762	2769		0	0		0	0		9.35	3	
Poulson Spring	spring	18-Dec-98		2845	2848		0	0		0.09	0.04		1.72	2.01	
Spring Hollow Drain	spring	5-May-98		2459	2478		14.61	13.56		0.02	0.05		0.1	0.03	3
Spring Hollow Drain	spring	3-Jun-98		2557	2566		185.5	186.79		0.04	0.05		0.05	0.04	120
Spring Hollow Drain	spring	30-Jun-98		2607	2635		158.33	158.12		0.04	0.02		-0.01	-0.01	20
Spring Hollow Drain	spring	5-Aug-98		2685	2698		58.7	54.49		0.03	0.02		0	0	400
Spring Hollow Drain	spring	14-Sep-98		2748	2758		0	0		0	0		0	0	
Spring Hollow Drain	spring	5-Oct-98		2811	2815		6.12	5.89		0.14	0.17		0	-0.01	30
Spring Hollow at Spring	spring	9-Nov-98		2823	2830		0	0		0.36	0.38		47.63	41.55	16
Spring Hollow at Spring	spring	18-Dec-98		2846	2850		0	0		0.22	0.19		38.65	37.13	
Spring Hollow	spring	5-May-98		3050	2474		2479	18.93		20.38	0.06		0.07	9.35	9.64
Spring Hollow Highway 39	spring	3-Jun-98		2556	2564		18.16	18.87		0.01	0.07		5.84	6.06	
Spring Hollow Hwy 39	spring	30-Jun-98		2611	2627		6.19	7.1		0.04	0.04		4.25	4.82	
Spring Hollow Hwy 39	spring	4-Aug-98		2692	2701		25.41	27.16		0.06	0.03		6.11	6.83	
Spring Hollow Hwy 39	spring	14-Sep-98		2743	2747		502.94	505.11		0	0		6.58	5.76	180
Spring Hollow Hwy 39	spring	5-Oct-98		2813	2816		151.64	152.92		0.1	0.19		15.13	17.34	120
Spring Hollow Hwy 39	spring	9-Nov-98		2824	2831		0	0		0.31	0.29		41.55	29.68	
Sterling wetland	wetland	5-May-98		2458	2494		7.62	9.6		0.08	0.09		2.62	2.67	160
Sterling Wetlands	wetland	3-Jun-98		2535	2547		5.14	4.92		0.08	0.07		1.66	1.32	420
Sterling Wetlands	wetland	30-Jun-98		2618	2623		9.36	4.43		0.15	0.15		1.24	1.13	315
Sterling Wetlands	wetland	4-Aug-98		2669	2687		4.52	3.5		0.03	0.08		0.26	0.22	220
Sterling Wetlands	wetland	14-Sep-98		2752	2753		0	0		0	0		0.66	0.9	600
Sterling Wetland	wetland	9-Nov-98		2825	2833		0	0		0	0		1.19	1.46	780
Orth Wetland	wetland	5-May-98		2488	2493		34.58	31.02		0.14	0.08		0.1	0.07	600
Orth Wetlands	wetland	3-Jun-98		2534	2546		8.72	8		0.04	0.04		1.22	0.74	1050
Orth Wetlands	wetland	30-Jun-98		2619	2626		4.66	5.24		0.04	0.04		0.5	0.35	210
Orth Wetlands	wetland	4-Aug-98		2674	2678		41.43	50.25		0.06	0.11		0.28	0.38	150
Orth Wetlands	wetland	14-Sep-98		2756	2780		0	0		0	0		0.61	0.59	150
Orth Wetland	wetland	9-Nov-98		2838	2842		0	0		0	0		1.11	1.28	60
Christensen Wetlands	wetland	5-May-98		2462	2472		14.46	15.81		0.2	0.19		0.05	0.08	6
Christensen Wetlands	wetland	3-Jun-98		2530	2538		6.41	6.62		0.08	0.02		0.07	0.11	150
Christensen Wetlands	wetland	30-Jun-98		2616	2631		7.32	6.41		0.05	0.05		0.03	0.02	50
Christensen Wetlands	wetland	4-Aug-98		2688	2699		13.8	15.1		0.06	0.02		0	0.01	42
Christensen Wetlands	wetland	14-Sep-98		2778	2779		0	0		0	0		0.23	0.24	75
Christensen Wetlands	wetland	9-Nov-98		2837	2840		0	0		0	0		4.85	4.23	6
Deionized Water	misc	5-May-98		2477	2485		0.1	0.3		0.01	0.03		0.03	0.04	
Deionized Water	misc	19-May-98		2510	2517		0.27	0.14		0	0		0.03	0.03	
Deionized Water	misc	3-Jun-98		2536	2544		0	0.29		-0.02	-0.01		0.03	-0.01	
DI Water	misc	15-Jun-98		2583	2589		0	0		-0.01	0		-0.02	-0.02	
DI Water	misc	30-Jun-98		2620	2628		-0.27	-0.37		-0.01	-0.01		-0.01	-0.01	
DI Water	misc	14-Jul-98		2651	2660		-0.33	-0.11		0.01	0.01		-0.01	-0.01	
DI Water	misc	4-Aug-98		2697	2703		-0.27	-0.82		0	-0.02		-0.01	-0.01	
DI Water	misc	25-Aug-98		2715	2725		-0.19	-0.81		0.07	0.05		-0.01	-0.01	
DI Water	misc	14-Sep-98		2795	2796		0	0		0.04	0.02		-0.01	-0.01	
DI Water	misc	5-Oct-98		2819	2821		-0.35	-0.71		0	0		0	-0.01	
DI Water	misc	9-Nov-98		2829	2836		0	0		0	0		0	0	
DI Water	misc	18-Dec-98		2847	2852		0	0		-0.03	-0.01		0	0	
People Gate	canal	27-Apr-99		2920	2928		22.91	21.17		0.003	0.004		0.11	0.154	
People Gate	canal	20-May-99		2971	2995		23.58	23.22		0.002	0.005		0.041	0.094	
People Gate	canal	24-Jun-99		3067	3070		34	33.26		0.004	0.033		0.064	0.021	
People Gate	canal	19-Jul-99		3084	3087		5.8	6.03		0.003	0.004		0.018	0.009	
People Gate	canal	17-Aug-99		3148	3166		5.75	4.72		0.012	0.009		0.055	0.057	
People Gate	canal	20-Sep-99		3181	3188		3.4	2.76		0.003	0.002		0.017	0.028	
People Gate	canal	27-Oct-99		3257	3262		3.35	2.81		0.005	0.003		0.046	0.05	
People Gate	canal	25-Nov-99		3303	3316		2.96	3.41		0.004	0.005		0.112	0.175	
ASCC Gate	canal	27-Apr-99		2937	2938		17.95	6.61		0.003	0.004		0.241	0.137	
ASCC Gate	canal	20-May-99		2977	2980		23.23	22.71		0.003	0.004		0.113	0.1	
ASCC Gate	canal	22-Jun-99		3055	3064		30.18	30.02		0.002	0.003		0.058	0.056	
ASCC Gate	canal	19-Jul-99		3081	3086		5.72	7.07		0.002	0.003		0.021	0.025	
ASCC Gate	canal	17-Aug-99		3146	3164		5.48	4.97		0.008	0.007		0.048	0.058	
ASCC Gate	canal	20-Sep-99		3183	3184		4.65	5.95		0.004	0.002		0.016	0.024	
ASCC Gate	canal	27-Oct-99		3240	3253		3.57	4.16		0.005	0.004		0.126	0.041	
ASCC Gate	canal	25-Nov-99		3299	3318		2.27	4.91		0.005	0.007		0.147	0.177	

Table E-2. Continued.

Waterbody	Type	Sample date	Duplicate sample number			Suspended sediment (mg/L)			PO ₄ as P (mg/L)			NO ₃ +NO ₂ (mg/L)			Flow (L/sec)
			0	1	2	0	1	2	0	1	2	0	1	2	
Radio Gauge	canal	27-Apr-99		2915	2926		16.57	16.34		0.002	0.005		0.27	0.157	
Radio Gauge	canal	20-May-99		2964	2978		22.88	22.48		0.005	0.004		0.069	0.09	
Radio Gauge	canal	24-Jun-99		3063	3069		32.07	32.9		0.002	0.015		0.062	0.164	
Radio Gauge	canal	19-Jul-99		3075	3080		7.92	7.67		0.002	0.003		0.061	0.018	
Radio Gauge	canal	17-Aug-99		3138	3152		7.14	6.81		0.009	0.006		0.081	0.053	
Radio Gauge	canal	20-Sep-99		3179	3191		5.7	4.85		0.003	0.001		0.017	0.029	
Radio Gauge	canal	27-Oct-99		3247	3265		3.56	3.85		0.003	0.004		0.042	0.043	
Big Fill	canal	27-Apr-99		2925	2935		8.4	5.96		0.007	0.002		0.055	0.064	
Big Fill	canal	20-May-99		2991	2993		8.88	8.81		0.003	0.005		0.03	0.015	
Big Fill	canal	24-Jun-99		3052	3061		37.88	34.9		0.002	0.002		0.028	0.038	
Big Fill	canal	19-Jul-99		3085	3088		20.47	15		0.003	0.003		0.003	0.001	
Big Fill	canal	17-Aug-99		3155	3158		6.82	6.2		0.006	0.01		0.028	0.026	
Big Fill	canal	20-Sep-99		3180	3187		6.54	7.06		0.001	0.002		0.011	0	
Big Fill	canal	27-Oct-99		3243	3245		4.23	6.29		0.003	0.002		0	0	
V Spill	canal	27-Apr-99		2902	2908		18.02	10.39		0.003	0.004		0.303	0.101	
V Spill	canal	20-May-99		2944	2953		9.72	7.83		0.002	0.002		0	0.131	
V Spill	canal	24-Jun-99		3015	3018		10.9	9.21		0.002	0.001		0.006	0.006	
V Spill	canal	19-Jul-99		3107	3112		6.96	5.81		0.004	0.01		0.002	0.038	
V Spill	canal	17-Aug-99		3125	3129		5.4	3.88		0.006	0.006		0.01	0.01	
V Spill	canal	20-Sep-99		3216	3224		2.35	2.77		0.001	0.002		0.01	0.017	
V Spill	canal	27-Oct-99		3260	3263		3.09	2.06		0.004	0.002		0.006	0.005	
Wilson Spill	canal	27-Apr-99		2891	2904		25.47	14.41		0.002	0.003		0.097	0.131	
Wilson Spill	canal	20-May-99		2947	2957		5.44	8.13		0.003	0.003		0.007	0.01	
Wilson Spill	canal	24-Jun-99		3020	3039		12.95	14.21		0.001	0.001		0	0.004	
Wilson Spill	canal	19-Jul-99		3111	3120		7.29	8.33		0.003	0.004		0.005	0.014	
Wilson Spill	canal	17-Aug-99		3142	3151		4.27	3.24		0.006	0.006		0.031	0.027	
Wilson Spill	canal	20-Sep-99		3208	3227		3.27	3.23		0.001	0.002		0.019	0.012	
Wilson Spill	canal	27-Oct-99		3283	3289		2.69	2.81		0.002	0.002		0.002	0	
Q1 Spill	canal	27-Apr-99		2912			9.25			0.003			0.068		
Q1 Spill	canal	20-May-99		2988	2992		9.01	9.67		0.002	0.003		0.001	0	
Q1 Spill	canal	24-Jun-99		3054	3057		15.87	16.48		0.001	0.001		0.005	0.004	
Q1 Spill	canal	19-Jul-99		3074	3077		6.96	6.42		0.004	0.003		0.001	0.007	
Q1 Spill	canal	17-Aug-99		3139	3162		5.07	2.58		0.006	0.003		0.005	0.033	
Q1 Spill	canal	20-Sep-99		3201	3211		1.82	1.88		0.002	0.003		0.006	0.007	
Q1 Spill	canal	27-Oct-99		3282	3290		2.09	2.78		0.002	0.003		0	0.008	
Cedar Spill	canal	27-Apr-99		2901	2905		13.27	15.31		0.003	0.002		0.301	41.693	
Cedar Spill	canal	20-May-99		2941	2945		7.67	10.28		0.002	0		0	0	
Cedar Spill	canal	24-Jun-99		3041	3046		32.95	35.26		0.001	0.001		0.006	0.002	
Cedar Spill	canal	19-Jul-99		3092	3097		23.51	23.79		0.003	0.004		0.006	0.152	
Cedar Spill	canal	17-Aug-99		3126	3140		4.23	4.56		0.008	0.005		0.017	0	
Cedar Spill	canal	20-Sep-99		3207	3237		7.94	7.78		0.001	0.002		0.015	0.011	
Cedar Spill	canal	27-Oct-99		3274	3279		3.84	5.01		0.003	0.003		0	0	
Hazard Creek	misc	27-Apr-99		2907	2909		41.76	39.8		0.026	0.027		0.424	0.31	
Hazard Creek	misc	20-May-99		2958	2959		20.01	21.87		0.002	0.003		0.019	0.016	
Hazard Creek	misc	24-Jun-99		3022	3045		19.45	2.81		0.008	0.01		0.054	0.039	
Hazard Creek	misc	19-Jul-99		3110	3114		15.64	14.39		0.013	0.018		0.019	0.013	
Hazard Creek	misc	17-Aug-99		3124	3177		8.04	9.17		0.012	0.012		0.073	0.075	
Hazard Creek	misc	20-Sep-99		3204	3212		7.53	8.73		0.01	0.013		0.184	0.156	
Hazard Creek	misc	27-Oct-99		3254	3255		8.78	8.62		0.028	0.031		0.237	0.233	
Hazard Creek	misc	25-Nov-99		3300	3307		11.87	12.28		0.599	0.639		1.824	1.775	
Spring Hollow Drain	misc	20-May-99		2943	2950		171.33	188.2		0.003	0.003		0.001	0.109	
Spring Hollow Drain	misc	24-Jun-99		3021	3036		187.38	195.06		0.002	0.003		0.003	0.001	
Spring Hollow Drain	misc	19-Jul-99		3098	3118		41.36	44.12		0.007	0.005		0.007	0.005	
Spring Hollow Drain	misc	17-Aug-99		3127	3143		30.46	36.85		0.01	0.007		0.012	0.019	
Spring Hollow Drain	misc	20-Sep-99		3203	3236		15.12	14.67		0.001	0.004		0.009	0.004	
Spring Hollow Drain	misc	27-Oct-99		3276	3280		5.47	5.01		0.003	0.003		0	0.005	
Spring Hollow Highway	spring	18-Mar-99		2864	2868								7.27	6.93	
Spring Hollow Highway	misc	27-Apr-99		2903	2910		44.26	45.57		0.008	0.005		7.619	0.115	
Spring Hollow Highway	misc	20-May-99		2949	2952		17.42	18.12		0.002	0.003		6.125	7.798	
Spring Hollow Highway	misc	24-Jun-99		3031	3033		14.87	14.2		0.002	0.001		3.313	2.669	
Spring Hollow Highway	misc	19-Jul-99		3091	3103		15.18	16.3		0.005	0.006		4.429	4.842	
Spring Hollow Highway	misc	17-Aug-99		3132	3137		548.94	556.82		0.021	0.023		6.087	5.044	
Spring Hollow Highway	misc	20-Sep-99		3217	3228		77.02	73.07		0.008	0.013		5.147	7.592	
Spring Hollow Highway	misc	27-Oct-99		3272	3275		94.61	92.79		0.009	0.009		4.306	4.555	
Spring Hollow Highway	misc	25-Nov-99		3297	3321		161.81	159.34		0.017	0.017		32.461	34.302	
Danielson	spring	27-Apr-99		2918	2921		51.35	75.64		0.002	0.002		1.106	1.117	
Danielson	spring	20-May-99		2970	2982		15.97	10.37		0.001	0.002		0.804	0.833	
Danielson Creek	spring	24-Jun-99		3032	3044		5.29	5.31		0.003	0.002		0.477	0.333	
Danielson Creek	spring	19-Jul-99		3096	3102		8.56	7.29		0.004	0.01		0.275	0.483	
Danielson Creek	spring	17-Aug-99		3160	3170		4.12	3.17		0.004	0.01		0.442	0.459	
Danielson Creek	spring	20-Sep-99		3223	3229		5.71	6.45		0.006	0.007		0.545	0.509	
Danielson Creek	spring	27-Oct-99		3256	3267		18.07	7.22		0.006	0.007		0.689	0.694	
Danielson Creek	spring	25-Nov-99		3319	3324		13.26	11.59		0.008	0.013		0.986	0.91	
Crystal Springs	spring	18-Mar-99		2859	2861								2.6	3	
Crystal	spring	27-Apr-99		2916	2924		6.09	6.09		0.002	0.007		2.63	2.411	
Crystal	spring	20-May-99		2965	2973		10.13	8.32		0.002	0		2.22	2.117	
Crystal	spring	24-Jun-99		3024	3043		6.17	5.61		0.003	0.002		2.011	1.2	
Crystal Springs	spring	19-Jul-99		3076	3072		3.58	4.19		0.004	0.003		1.147	0.738	
Crystal Springs	spring	17-Aug-99		3144	3149		7.08	7.78		0.006	0.004		1.493	1.524	
Crystal Springs	spring	20-Sep-99		3210	3230		5.14	5.9		0.003	0.006		2.099	2.229	
Crystal Springs	spring	27-Oct-99		3248	3268		4.29	4.39		0.009	0.009		1.861	1.882	
Crystal Springs	spring	25-Nov-99		3301	3312		5.86	7.02		0.009	0.008		1.818	1.557	

Table E-2. Continued.

Waterbody	Type	Sample date	Duplicate sample number			Suspended sediment (mg/L)			PO ₄ as P (mg/L)			NO ₃ +NO ₂ (mg/L)			Flow (L/sec)
			0	1	2	0	1	2	0	1	2	0	1	2	
Driscoll Spring	spring	18-Mar-99		2863	2875							3.83	4.67		
Driscoll	spring	27-Apr-99		2913	2914	37.02	34.23		0.005	0.006		4.196	4.115		
Driscoll	spring	20-May-99		2946	2956	22.86	18.12		0.003	0.003		2.63	3.608		
Driscoll	spring	24-Jun-99		3030	3040	12.91	17.46		0.003	0.002		2.652	4.078		
Driscoll Spring	spring	19-Jul-99		3100	3105	16.42	18.14		0.012	0.013		1.675	1.302		
Driscoll Spring	spring	17-Aug-99		3161	3169	1.71	2.05		0.007	0.014		3.072	2.831		
Driscoll Spring	spring	20-Sep-99		3202	3205	2.23	1.75		0.003	0.003		3.798	3.118		
Driscoll Spring	spring	27-Oct-99		3258	3269	12.07	1.77		0.006	0.005		3.524	3.57		
Driscoll Spring	spring	25-Nov-99		3308	3315	2.23	1.73		0.011	0.009		3.338	3.061		
Sterling Wetland	spring	18-Mar-99		2853	2865							2.83	2.93		
Cornforth Spring	spring	18-Mar-99		2866	2856							3.67	3		
Cornforth	spring	27-Apr-99		2931	2932	6.95	9.42		0.015	0.012		3.955	3.733		
Cornforth	spring	20-May-99		2955	2960	11.09	9.91		0.011	0.007		3.218	2.931		
Cornforth	spring	24-Jun-99		3023	3025	4.33	4.25		0.018	0.018		2.303	2.833		
Cornforth Spring	spring	19-Jul-99		3089	3108	5.17	2.97		0.014	0.01		2.682	1.846		
Cornforth Spring	spring	17-Aug-99		3168	3174	4.94	4.69		0.022	0.022		2.485	2.457		
Cornforth Spring	spring	20-Sep-99		3200	3214	5.37	5.57		0.054	0.047		1.632	1.62		
Cornforth Spring	spring	27-Oct-99		3252	3264	5.4	5.99		0.032	0.037		1.356	1.401		
Cornforth Spring	spring	25-Nov-99		3295	3302	3.72	3.61		0.016	0.02		1.395	1.522		
Sportsmen's Park N	spring	17-Aug-99		3133	3167	2.86	2.78		0.041	0.036		3.225	2.622		
Poulson Spring	spring	20-Sep-99		3219	3233	3569.8	2661		0.018	0.047		4.4	3.709		
Poulson Spring	spring	27-Oct-99		3277	3291	354.83	248.7		0.028	0.027		3.143	3.07		
Poulson Spring	spring	25-Nov-99		3313	3323	130.24	27.44		0.044	0.011		5.286	6.424		
Spring Hollow Spring	spring	27-Apr-99		2900	2906	4.59	0		0.057	0.048		44.351	44.422		
Spring Hollow Spring	spring	25-Nov-99		3298	3309	2.56	3.15		0.052	0.063		35.715	48.348		
Spring Hollow Spring	spring	18-Mar-99		2855	2872							20.33	35.33		
Sterling	wetland	27-Apr-99		2919	2934	56.77	61.72		0.005	0.005		2.12	2.038		
Sterling	wetland	20-May-99		2974	2979	18.72	24.59		0.002	0.005		1.533	0.772		
Sterling	wetland	24-Jun-99		3028	3047	13.13	11.81		0.007	0.008		0.631	0.387		
Sterling Wetland	wetland	19-Jul-99		3078	3093	5.9	4.87		0.01	0.011		0.742	0.533		
Sterling Wetland	wetland	17-Aug-99		3150	3172	3.29	3.21		0.009	0.008		0.503	0.533		
Sterling Wetland	wetland	20-Sep-99		3220	3234	4.99	4.14		0.003	0.006		0.928	0.106		
Sterling Wetland	wetland	27-Oct-99		3266	3270	25.52	24.91		0.025	0.021		1.371	1.195		
Sterling Wetland	wetland	25-Nov-99		3292	3296	79.46	81.14		0.018	0.013		1.823	1.701		
Orth	wetland	27-Apr-99		2922	2936	68.91	64.21		0.028	0.03		0.092	0.132		
Orth	wetland	20-May-99		2940	2948	35.25	36.75		0.006	0.006		0.225	0.203		
Orth	wetland	24-Jun-99		3017	3035	9.12	9.43		0.005	0.005		0.064	0.072		
Orth Wetland	wetland	19-Jul-99		3090	3095	3.87	2.4		0.016	0.021		0.027	0.063		
Orth Wetland	wetland	17-Aug-99		3156	3176	14.23	14.96		0.009	0.01		0.069	0.089		
Orth Wetland	wetland	20-Sep-99		3215	3238	7.17	7.97		0.003	0.005		0.215	0.009		
Orth Wetland	wetland	27-Oct-99		3244	3251	8.16	8.3		0.003	0.003		1.28	1.315		
Orth Wetland	wetland	25-Nov-99		3293	3305	65.88	68.68		0.004	0.004		1.954	1.97		
Christiansen Canal	wetland	20-May-99		2942	2961	16.17	17.04		0.003	0.003		0.302	0.382		
Christiansen	wetland	24-Jun-99		3016	3042	3.78	2.81		0.004	0.003		0.054	0.05		
Christiansen #2	wetland	19-Jul-99		3094	3113	1.74	1.84		0.009	0.013		0.016	0.012		
Christiansen #2	spring	17-Aug-99		3165	3171	1.62	1.71		0.011	0.009		0.091	0.088		
Christiansen #2	wetland	20-Sep-99		3213	3218	6.27	6.37		0.003	0.001		0.319	0.309		
Christiansen	wetland	27-Apr-99		2923	2927	121.31	118.72		0.009	0.006		0.462	0.424		
Christiansen	wetland	20-May-99		2967	2972	4.94	5.69		0.005	0.002		1.219	1.083		
Christiansen	wetland	24-Jun-99		3019	3026	5.45	8.82		0.003	0.003		0.013	0.012		
Christiansen Wetland	wetland	19-Jul-99		3109	3115	2.98	2.53		0.008	0.01		0.016	0.014		
Christiansen Wetland	wetland	17-Aug-99		3159	3163	2.93	3.8		0.007	0.009		0.033	0.033		
Christiansen Wetland	wetland	20-Sep-99		3231	3232	4.42	4.06		0.006	0.002		0.108	0.824		
Christiansen Wetland	wetland	27-Oct-99		3246	3249	55.53	53.03		0.003	0.004		0.251	0.246		
Smith	wetland	27-Apr-99		2917	2929	15.27	16.09		0.003	0.005		0.28	0.324		
Smith	wetland	20-May-99		2951	2954	8.52	9.02		0.007	0.006		0.194	0.195		
Smith	wetland	24-Jun-99		3034	3037	26.03	23.59		0.005	0.006		0.018	0.004		
Smith Spring	wetland	19-Jul-99		3099	3106	38.99	5.6		0.012	0.01		0.009	0.001		
Smith	wetland	17-Aug-99		3135	3136	4.55	5.17		0.012	0.011		0.015	0.016		
Smith Spring	wetland	20-Sep-99		3225	3226	7.5	6.99		0.004	0.005		0.018	0.017		
Smith Spring	wetland	27-Oct-99		3261	3271	9.54	7.9		0.003	0.004		0.855	0.669		
Smith Spring	wetland	25-Nov-99		3294	3310	19.35	14.84		0.003	0.007		1.084	1.533		
People's River Gates	canal	19-Jun-00		3338	3365	11.41	9		0.01	0.01		0.07	0.15		
People's River Gates	canal	2-Aug-00		3378	3379	13.58	5.77		0	0.01		0.02	0.04		
People's River Gates	canal	17-Oct-00		3446	3462	2.17	2.64		0.01	0		0.11	0.13		
ASCC Gate	canal	19-Jun-00		3334	3360	11.42	9.6		0.02	0		0.07	0.09		
River Gates	canal	2-Aug-00		3391	3394	8.88	13.8		0	0		0.02	0.04		
ASCC River Gates	canal	17-Oct-00		3468	3471	2.03	2.86		0	0		0.12	0.12		
Radio Gauge	canal	19-Jun-00		3328	3332	8.2	11.21		0.01	0		0.12	0.09		
Radio Gauge	canal	17-Oct-00		3464	3470	0.81	1.61		0	0.01		0.1	0.1		
Big Fill	canal	19-Jun-00		3331	3348	19.42	15.82		0.01	0.01		0.05	0.14		
Big Fill	canal	2-Aug-00		3377	3381	9.26	9.95		0	0		0	0		
Big Fill	canal	17-Oct-00		3444	3457	1.51	-0.73		0	0.01		0.01	0.01		
V Spill	canal	19-Jun-00		3351	3373	6.26	5.48		0.01	0		0.01	0		
V Spill	canal	2-Aug-00		3395	3401	5.25	4.5		0.01	0		0	0.03		
V Spill	canal	17-Oct-00		3430	3434	0.43	1.11		0.02	0.01		0.01	0.01		
Wilson Spill	canal	19-Jun-00		3346	3367	6.05	5.46		0.01	0.01		0.01	0		
Wilson Spill	canal	2-Aug-00		3396	3409	4.98	4.7		0	0		0.01	0.01		
Wilson Spill	canal	17-Oct-00		3419	3438	7.68	1.27		0.01	0.01		0.04	0		

Table E-2. Continued.

Waterbody	Type	Sample date	Duplicate sample number			Suspended sediment (mg/L)			PO ₄ as P (mg/L)			NO ₃ +NO ₂ (mg/L)			Flow (L/sec)
			0	1	2	0	1	2	0	1	2	0	1	2	
Q1 Spill	canal	19-Jun-00	3341	3363		4.81	4.97		0.01	0		0	0	0	
Q1 Spill	canal	16-Jun-00	3487	3503		3.59	2.46		0.02	0.01		0.23	0.12		
Q1 Spill	canal	17-Jun-00	3491	3508		0.79	2.26		0.01	0.02		0.31	0.15		
Q1 Spill	canal	2-Aug-00	3399	3407		5.23	3.47		0.01	0.01		0.03	0		
Q1 Spill	canal	17-Oct-00	3421	3431		4.12	0.51		0.04	0.01		0.03	0.01		
Cedar Spill	canal	19-Jun-00	3339	3366		18.16	16.7		0.01	0.01		0.03	0.05		
Cedar Spill	canal	2-Aug-00	3402	3408		26.67	10.54		0	0		0.01	0		
Cedar Spill	canal	17-Oct-00	3416	3435		2.96	3.92		0.01	0.02		0.02	0.01		
Hazard Creek	misc	19-Jun-00	3336	3354		13.36	15.64		0.02	0.02		0.62	0.39		
Hazard Creek	misc	2-Aug-00	3403	3406		28.98	30.64		0.02	0.02		0.05	0.04		
Hazard Creek	misc	17-Oct-00	3418	3427		18.78	13.52		0.02	0.04		0.14	0.16		
Spring Hollow Drain	misc	19-Jun-00	3337	3345		59.42	75.38		0.12	0.09		2.39	3.06		
Spring Hollow Drain	misc	2-Aug-00	3398	3400		10.45	6.37		0.01	0.01		5.82	5.32		
Spring Hollow Drain	misc	17-Oct-00	3429	3433		10.48	12.38		0.01	0.01		0	0		
Spring Hollow Hwy	misc	2-Aug-00	3410	3411		28.02	27.75		0.01	0.02		8.43	11.21		
Spring Hollow Hwy	misc	17-Oct-00	3432	3437		714.71	697.96		0.02	0.02		8.68	8.62		
Danielson	spring	19-Jun-00	3349	3364		10.28	7		0.01	0.01		0.42	0.34		
Danielson	spring	2-Aug-00	3387	3392		11.83	7.26		0.01	0.01		0.35	0.38		
Danielson	spring	17-Oct-00	3456	3469		2.76	4.53		0	0.01		0.68	0.64		
Crystal	spring	19-Jun-00	3347	3357		9.07	7.04		0.01	0		2.07	1.38		
Crystal	spring	2-Aug-00	3389	3390		5.86	7.74		0	0.01		1.18	1.54		
Crystal	spring	17-Oct-00	3448	3467		38.96	28.52		0.01	0.02		1.79	1.91		
Driscoll	spring	19-Jun-00	3343	3350		4.66	4.28		0.01	0		3.36	3.34		
Driscoll	spring	2-Aug-00	3376	3383		21.06	27.98		0.01	0		1.17	1.5		
Driscoll	spring	17-Oct-00	3443	3451		16.39	14.14		0.01	0.01		3.06	3.42		
Cornforth	spring	19-Jun-00	3342	3359		11.92	7.46		0.03	0.02		1.97	1.49		
Cornforth	spring	2-Aug-00	3397	3405		15.69	11.6		0.01	0.01		1.94	3.05		
Cornforth	spring	17-Oct-00	3449	3466		14.12	10.69		0.11	0.09		1.31	0.93		
Sportsmens' N	spring	17-Oct-00	3447	3455		3.9	3.7		0.03	0.02		3.25	3.34		
Poulson Spring	spring	17-Oct-00	3424			6.65	0		0.01	0		0.14	0		
Spring Hollow Spring	spring	17-Oct-00	3417	3420		10.7	9.6		0.04	0.02		16.08	15.9		
Sterling	wetland	19-Jun-00	3333	3355		7.18	17.14		0.01	0.01		0.94	0.77		
Sterling	wetland	2-Aug-00	3386	3393		5.6	5.81		0.01	0.01		0.16	0.16		
Sterling	wetland	17-Oct-00	3453	3460		5.06	4.66		0.02	0.03		1.18	1.2		
Orth	wetland	17-Oct-00	3422	3426		11.09	9.43		0.02	0.02		0.64	0.67		
Christiansen Canal	wetland	17-Oct-00	3423	3439		5.22	6.1		0.03	0.02		1.09	1.2		
Christiansen	wetland	19-Jun-00	3329	3352		8.88	10.68		0.01	0.03		0.01	0.02		
Christiansen	wetland	2-Aug-00	3380	3382		4.6	3.42		0	0.01		0.02	0.02		
Christiansen	wetland	17-Oct-00	3454	3463		7.25	9.1		0.01	0.01		0.29	0.28		
Smith	wetland	19-Jun-00	3369	3374		15.37	13.78		0.01	0.01		0.1	0.15		
Smith	wetland	2-Aug-00	3384	3385		21.46	24.07		0.02	0.01		0.01	0.01		
Smith	wetland	17-Oct-00	3442	3465		2.32	3.17		0	0		0.02	0.05		
Rainwater	rain	18-Aug-00	3368	3372		13.38	12.86		0.07	0.06		1.01	1.01		
DI	misc	17-Oct-00	3452	3461		-3.3	-0.87		0.01	0.01		0	0.02		
DI	misc	19-Jun-00	3358	3371		0.47	2.21		0.01	0.01		0.01	0		
DI	misc	2-Aug-00	3388	3404		1.41	0.63		0.01	0		0	0		
DI	misc	17-Oct-00	3436	3440		-0.71	-1.5		0.04	0.01		0.01	0		
DI	misc	15-Nov-00	3498	3510		-2.19	-4.19		0.01	0.01		0	0.01		

Table E-3. Sampling data from streams, canals, and wetlands on north and west sides of American Falls Reservoir, 2001 to 2002.

Waterbody	Date	Duplicate sample number		Suspended sediment (mg/L)		NO ₃ +NO ₂ as N (mg/L)		PO ₄ as P (mg/L)		Total N (mg/L)		Total P (mg/L)	
		1	2	1	2	1	2	1	2	1	2	1	2
Snake at Idaho Falls	18-Apr-01	3517	3551	25	19	0.068	0.065	0.005	0.634	0.55	0.51	0.02	0.03
Snake at Shelley	18-Apr-01	3514	3534	30	20	0.126	0.122	0.006	0.007	1.34	1.09	0.02	0.04
Snake at People's	18-Apr-01	3512	3515	31	31	0.091	0.086	0.008	0.004	-0.3	0.1	-0.01	0.02
Snake at ASCC Gate	19-Jun-01	3558	3575	18	23	0.068	0.082	0.01	0.021	0.07	0.27	0.01	0.01
Snake at ASCC Gate	7-Aug-01	3602	3604	27	26	0.053	0.057	0.003	0.005	0.07	0.14	0.01	0.01
Snake at ASCC Gate	19-Sep-01	3605	3609	17	22	0.011	0.024	0.005	0.012	0.29	0.42	0.01	0.01
Snake at People's	17-May-02	3645	3658	20	16	0.008	0.012	0.003	0.004	0.1	0.03	0.02	0.01
Snake at ASCC Gate	14-Jun-02	3678	3687	8	8	0.014	0.016	0.002	0.002	0.22	0.12	0.06	0
Snake at ASCC Gate	9-Aug-02	3711	3718	6	5	0.021	0.026	0.004	0.006	0.06	0.25	0.02	0.03
Snake at ASCC Gate	27-Sep-02	3732	3733	2	-1						0.09		0.02
Radio Gauge	19-Jun-01	3567	3570	21	23	0.07	0.072	0.012	0.006	0.08	0.08	0.01	0.01
Radio Gauge	7-Aug-01	3590	3592	21	20	0.042	0.042	0.008	0.005	0.02	-0.06	0.01	0
Radio Gauge	19-Sep-01	3611	3626	22	14	0	0.013	0.004	0.017	-0.13	0.22	0.01	0.01
Radio Gauge	17-May-02	3642	3650	23	20	0.012	0.008	0.01	0.004	0.15	0.1	0.02	0.03
Radio Gauge	14-Jun-02	3674	3677	24	11	0.012	0.009	0.002	0.002	0.35	0.11	0.03	0.08
Radio Gauge	9-Aug-02	3698	3712	5	3	0.02	0.02	0.005	0.005	0	0.11	0.02	0.02
Big Fill	19-Jun-01	3566	3568	17	21	0.033	0.034	0.018	0.007	0.14	-0.05	0	0
Big Fill	7-Aug-01	3577	3584	16	17	0.014	0.001	0.219	0.006	-0.02	-0.07	0	0
Big Fill	19-Sep-01	3615	3632	19	14	0.011	0.003	0.02	0.008	0.11	0.04	0.01	0.01
Big Fill	17-May-02	3641	3656	16	20	0.01	0.007	0.002	0.001	0.06	0.07	0.03	0.02
Big Fill	14-Jun-02	3664	3690	11	12	0.005	0.01	0.004	0.002	0.13	0.1	0.01	0
Big Fill	9-Aug-02	3700	3706	2	2	0.014	0.007	0.003	0.001	0.06	0.09	0.02	0.02
V Spill	19-Jun-01	3572	3573	17	11	0.053	0.058	0.02	0.031	0.57	0.02	0.01	0.02
V Spill	7-Aug-01	3589	3597	17	14		0.031		0.004	-0.05	-0.04	0	0
V Spill	19-Sep-01	3619	3621	19	15		0.036	0.023	0.01	0.78	0.4	0.02	0.01
V Spill	18-May-02	3643	3659	10	8	0.028	0.007	0.003	0.002	1.14	0.84	0.02	0.02
V Spill	14-Jun-02	3665	3685	11	10	0.002	0.003	0.001	0.002	0.23	0.42	0.03	0.03
V Spill	9-Aug-02	3702	3716	0	0	0.006	0.005	0.004	0.003	-0.04	-0.02	0.01	0.01
V Spill	27-Sep-02	3745	3752							0.05	0.36	0.04	0.02
V Spill	28-Sep-02	3721	3723	2	2	0.075	0.083	0.001	0	0.03	0.01	0.01	0.02
Wilson Spill	19-Jun-01	3556	3564	13	9	0.105	0.111	0.025	0.006	4.5	0.28	0.02	0.01
Wilson Spill	7-Aug-01	3580	3588	16	14	0.133	0.141	0.15	0.16	0.14	0.11	0	0
Wilson Spill	19-Sep-01	3607	3625	16	22	0.076	0.155	0.005	0.03	0.03	0.02	0.01	0.01
Wilson Spill	18-May-02	3644	3653	10	10	0.01	0.008	0.002	0.002	0.03	0.05	0.02	0.02
Wilson Spill	14-Jun-02	3667	3668	11	10	0.001	0.002	0	-0.001	0.13	0.16	0.02	0.02
Wilson Spill	9-Aug-02	3705	3710	2	3	0.004	0.018	0.001	0.008	0.2	0	0.02	0.01
Wilson Spill	27-Sep-02	3734	3742							1.7	0.05	0.02	0.02
Wilson Spill	28-Sep-02	3726	3730	2	2	0.044	0.122	-0.001	0.001	0	0.07	0.02	0.01
Hazard at Culvert	19-Sep-01	3612	3613	47	44	0	0.001	0.006	0.017	0.34	0	0.02	0.02
Hazard at Culvert	18-May-02	3647	3652	15	15	0.007	0.011	0.002	0.003	2.82	0.36	0.03	0.02
Hazard at Culvert	14-Jun-02	3666	3673	24	24	0.007	0.005	0.001	0.004	0.18	0.09	0.03	0.02
Hazard at Culvert	9-Aug-02	3697	3709	2	2	0.052	0.057	0.002	0.006	0.13	0.11	0.02	0.02
Hazard at Culvert	28-Sep-02	3725	3731	6	5	0.065	0.049	0.001	0.002	0.26	0.17	0.02	0.02
Nash Spill	18-May-02	3640	3651	19	18	0.011	0.006	0.001	0.002	-0.01	0.06	0.03	0.02
Nash Spill	14-Jun-02	3670	3688	7	7	0.002	0.004	0.002	0.002	0.17	0.09	0.01	0.01
Nash Spill	9-Aug-02	3708	3714	2	4	0.009	0.004	0.003	0.001	0.04	0.05	0.01	0.02
Nash Spill	27-Sep-02	3741	3755							0.34	-0.01	0	0
Q1 Spill	19-Jun-01	3554	3563	31	16	0.001	0.001	0.012	0.005	0.8	-0.04	0.01	0
Q1 Spill	7-Aug-01	3591	3595	20	20	0.003	0.002	0.006	0.005	0.1	-0.04	0	0
Q1 Spill	19-Sep-01	3610	3623	18	15	0	0.016	0.007	0.009	0.04	0	0.01	0.02
Q1 Spill	18-May-02	3638	3639	12	12	0.013	0.013	0.005	0.002	0.05	0.05	0.03	0.02
Q1 Spill	14-Jun-02	3675	3691	10	9	0.005	0.004	0.002	0.004	0.06	0	0.02	0
Q1 Spill	9-Aug-02	3695	3699	-1	1	0.003	0.013	0.002	0.001	0.04	0.02	0.01	0.01
Q1 Spill	27-Sep-02	3747	3756							0.38	0.74	0.01	0.01
Q1 Spill	28-Sep-02	3727	3728	2	2	0.001	0.005	-0.001	0	0	0	0.02	0.02
Cedar Spill	19-Jun-01	3560	3569	38	31	0	0	0.007	0.005	-0.03	-0.1	0	0
Cedar Spill	7-Aug-01	3583	3585	23	15	0.021	0.002	0.006	0.005	-0.06	-0.07	0	0
Cedar Spill	19-Sep-01	3629	3630	13	10	0.067	0.008	0.01	0.009	-0.02	-0.02	0.02	0.01
Cedar Spill	18-May-02	3657	3661	19	15	0.259	0.008	0.001	0.005	0.29	0.06	0.02	0
Cedar Spill	14-Jun-02	3676	3681	9	7	0.004	0.005	0.002	0.004	0.07	0.05	0.02	0
Cedar Spill	9-Aug-02	3713	3717	2	2	0.003	0.011	0.002	0.003	-0.01	-0.01	0.02	0.01
Cedar Spill	27-Sep-02	3737	3746							2.3	0.1	0.05	0
Cedar Spill	28-Sep-02	3720	3722	2	2	-0.003	0.003	0.002	0	0	-0.01	0.01	0.02
R Spill	19-Jun-01	3555	3559	15	23	0.005	0.02	0.01	0.013	0	0	0.02	0.01
R Spill	7-Aug-01	3586	3594	16	12	0.006	0.006	0.006	0.004	-0.11	-0.04	0	0.01
R Spill	19-Sep-01	3616	3620	12	15	0	0.001	0.012	0.029	-0.06	0.06	0.01	0.01
R Spill	18-May-02	3655	3660	10	14	0.009	0.013	0.005	0.002	0.76	0.65	0.03	0.02
R Spill	14-Jun-02	3682	3686	4	5	0.006	0.008	0.005	0.003	0.04	0.11	0.02	0.01
R Spill	9-Aug-02	3694	3703	1	-1	0.009	0.015	0.002	0.005	0.01	0.03	0.02	0.02
R Spill	27-Sep-02	3754	3758							-0.09	1.08	0	0.05

Table E-3. Continued.

Waterbody	Date	Duplicate sample number		Suspended sediment (mg/L)		NO ₃ +NO ₂ as N (mg/L)		PO ₄ as P (mg/L)		Total N (mg/L)		Total P (mg/L)	
		1	2	1	2	1	2	1	2	1	2	1	2
Spring Hollow Drain	19-Jun-01	3552	3562	24	15	0.028	0.006	0.015	0.01	0.46	0.08	0.01	0.02
Spring Hollow Drain	7-Aug-01	3587	3601	22	16	0.001	0.002	0.004	0.005	0.02	-0.02	0.01	0.01
Spring Hollow Drain	19-Sep-01	3598	3617	34	36	0.001	0	0.006	0.011	0.02	0.16	0.03	0.11
Spring Hollow Drain	18-May-02	3648	3654	238	331	0.699	0.655	0.083	0.117	2.66	2.48	0.64	0.55
Spring Hollow Drain	14-Jun-02	3671	3684	11	11	-0.006	0.018	0.004	0.002	0.05	0.17	0.03	0.05
Spring Hollow Drain	9-Aug-02	3692	3701	5	4	0.012	0.029	0.004	0.005	0.21	0.19	0.03	0.02
Spring Hollow Drain	27-Sep-02	3736	3739							2.38	-0.04	0.04	0.01
Sportsman's Park	10-Sep-01					5							
Sportsman Park Springs	20-Sep-02	3778	3791			5.518	5.8	0.007	0.011				
Vollmer S Spring	10-Sep-01					4							
Vollmer N Spring	10-Sep-01					4							
Vollmer W Spring	10-Sep-01												
Vollmer Creek	10-Sep-01												
Vollmer Springs	16-Feb-02	3636	3637	40	34	4.222	4.024	0.044	0.073	4.68	4.38	0.06	0.08
Vollmer Springs	20-Sep-02	3771	3787			2.488	1.502	0.007	0.005				
Schroeder	10-Sep-01					6							
Schroeder Springs	27-Nov-02	3772	3776			2.749	3.02	0.019	0.025				
Knudsen	10-Sep-01					10							
Knudsen Springs	24-Nov-02	3773	3781			14.819	10.324	0.029	0.017				
Spring Hollow Spring	28-Feb-01	3543	3545	2	3	41.376	40.69	0.028	0.02	44.29	45.81	0.13	0.1
Spring Hollow Spring	10-Sep-01	3624	3628	32	31	39.709	39.146	0.087	0.225	45.8	45.59	0.08	0.11
Spring Hollow Spring	16-Feb-02	3634	3635	88	84	39.682	40.227	0.057	0.058	49.35	50.6	0.09	0.09
Spring Hollow Spring	20-Sep-02	3782	3784			12.943	13.248	0.017	0.023				
Spring Hollow Spring	24-Nov-02	3775	3785			30.601	26.649	0.069	0.053				
Spring Hollow Highway	28-Feb-01	3542	3544	7	7	13.297	12.94	0.009	0.035	13.76	14.12	0.11	0.11
Spring Hollow Highway	19-Jun-01	3574	3576	443	434	6.704	7.373	0.007	0.006	6.98	6.97	0.16	0.15
Spring Hollow Highway	7-Aug-01	3582	3599	60	63	6.591	6.944	0.007	0.013	7.53	7.52	0.05	0.06
Spring Hollow Highway	19-Sep-01	3622	3631	99	118	9.953	9.862	0.022	0.032	11.27	11.3	0.15	0.15
Spring Hollow Highway	14-Jun-02	3672	3679	571	529	6.481	8.461	0.001	0.012	8.23		0.43	0.29
Spring Hollow Highway	9-Aug-02	3693	3704	10	9	8.929	9.576	0.004	0.01				
Spring Hollow Highway	27-Sep-02	3743	3753							10.96	12.3	0.02	0.02
Spring Hollow Highway	24-Nov-02	3780	3788			21.098	22.633	0.017	0.021				
Jahnke Tree	10-Sep-01					10							
Aberdeen Sewage Plant	19-Sep-01	3614	3618	32	43	4.889	5.012	1.077	0.774	9.6	10.37	1.44	1.51
Hazard at Beach Road	20-Apr-01	3538	3550	52	85	0.248	0.234	0.004	0.014	9.67	8.09	1.24	1.6
Hazard at Beach Road	19-Jun-01	3553	3557	29	17	0.085	0.089	0.429	0.053	0.92	2.88	0.14	0.12
Hazard at Beach Road	7-Aug-01	3578	3581	20	20	1.014	0.917	0.012	0.019	2.05	1.68	0.38	0.43
Hazard at Beach Road	19-Sep-01	3608	3627	27	22	0.665	0.632	0.073	0.109	1.05	1.16	0.21	0.23
Christiansen Drain	18-Apr-01	3519	3523	72	88		2.682		0.008	3.28	3.56	0.03	0.03
Christiansen sub	18-Apr-01	3527	3541	68	59	5.486	5.711	0.007	0.006	5.71	5.92	0.01	0.03
Cornforth Spring	18-Apr-01	3518	3548	47	50	3.855	3.662	0.013	0.007	4.25	3.91	0.06	0.02
Crystal	18-Apr-01	3516	3520	84	74	2.291	2.202	0.006	0.015	2.5	2.46	0.03	0.03
Crystal	18-Apr-01	3524	3536	98	82	2.88	2.931	0.007	0.002	3.1	3.16	0.03	0.05
Crystal	18-Apr-01	3513	3532	65	73	2.784	2.757	0.008	0.019	2.8	3.32	0.02	0.01
Driscoll	18-Apr-01	3539	3546	86	92	3.521	3.663	0.597	0.065	4.37	4.08	0.12	0.02
Orth	18-Apr-01	3521	3529	56	84	0.653	0.668	0.005	0.019	1.57	1.91	0.22	0.12
Smith	18-Apr-01	3528	3531	72	104	0.175	0.173	0.015	0.008	1.01	1.28	0.09	0.1
Sportsman's Artesian	18-Apr-01	3522	3537	46	22	0.138	0.143	0.021	0.005	-0.09	0.1	0.04	0.02
Sterling	18-Apr-01	3530	3533	74	73	1.739	1.801	0.022	0.006	2.13	2.83	0.07	0.06
Springfield Lake Outlet	18-Apr-01	3535	3540	59	51	0.647	0.648	0.004	0.008	1.14	1.08	0.02	0.11
Danielson	18-Apr-01	3526	3549	65	54	1.03	0.979	0.004	0.013	1.25	1.69	0.03	0.05
Spring Hollow Drain	7-Aug-01	3596	3603	30	26	0.001	0	0.006	0.004	0.03	-0.04	0.02	0.01
Deionized Water	19-Sep-01	3606	3633	0	1	0	0.005	0.005	0.008	-0.22	2.45	0	0.01
Deionized Water	24-Oct-01	3561	3565	-2	0	0.002	0.001	0.013	0.013	1.78	0.14	0	0
Deionized Water	24-Oct-01	3593	3600	0	0	0.002	0.01	0.004	0.005	-0.07	-0.1	0	0
Deionized Water	25-Oct-01	3571	3579	-1	1	0.001	0.001	0.005	0.007	0.05	1.05	0	0.01
Deionized Water	18-May-02	3646	3662	1	3	0.011	0.015	0.005	0.003	0.23	0.68	0	0.01
Deionized Water	18-May-02	3649	3663	3	-1	0.006	0.01	0.005	0.005	0.07	-0.24	0	0.03
Deionized Water	14-Jun-02	3669	3680	-1	1	-0.002	0.001	-0.001	0.002	-0.14	0.07	0	0.01
Deionized Water	14-Jun-02	3683	3689	-1	-1	0	0.001	0.003	0.001	-0.1	-0.15	0.01	0
Deionized Water	9-Aug-02	3696	3715	-1	-1	0.002	0	0.001	0	3.19	-0.18	0.06	0.01
Deionized Water	9-Aug-02	3707	3719	-1	-1	0.003	0.008	0.005	0.006	-0.21	0.73	0.01	0
Deionized Water	27-Sep-02	3740	3750							0.01	-0.09	0	0.01
Deionized Water	28-Sep-02	3724	3729	0	0	-0.002	-0.005	-0.001	0.001		0.24		0
Deionized Water	27-Nov-02	3774	3789			0.001	0	0.003	0				
Deionized Water	8-Apr-03	3765	3766			-0.002	0	0.003	0.003				
Deionized Water	27-May-03	3792	3797							0.13	-0.18	0.01	0.02
	27-May-03	3802								-0.3		0	
	2-Jun-03	3805	3806							-0.3	-0.3	-0.01	-0.01